The Veterinary Record.

(Founded by William Hunting, F.R.C.V.S., 1888.)

No. 8. FEBRUARY 23, 1929. Vol. 9.

Malignant Catarrh in Bovines and Acidosis.

By F. T. Harvey, F.R.C.V.S., St. Columb.

The report of the discussion on the above disease in the *Record* of February 9th, which took place at Newcastle-on-Tyne in December, is of general interest. In Cornwall, as far as I am aware, the disease is usually sporadic, and I have not seen more than two or perhaps three cases a year, or at least cases which might be described as of a severe type, and only rarely has a second case occurred on a farm in a series of years. I am inclined to think there must be something different in the nature of the disease discussed at Newcastle. Why do the horn cores become loose and freely moveable on the head, as mentioned by Mr. Lyle Stewart? I have seen the horn cores fall off. In the case of a young bull with a temperature of 108° F. the horns and hoofs came off on the third day. He was then destroyed. A more typical case, however, is the following:—

Subject. A heifer, aged 2½ years.

Symptoms. Anorexia, hyper-pyrexia, photophobia, tachycardia, frequent snuffling respirations, cough, rigors (which continued two or more days), brick-red coloration of the visible mucous membranes, with muco-purulent catarrh, constipation, and diminished urinary output. On the third day the respirations were oral, cheeks ballooning at expirations, foul breath, temperature 107°. Neither food nor water was taken; the general appearance was bad, and the owner was expecting a fatal issue.

Treatment. At first a saline laxative and antifebrine, followed by yeast in four-ounce doses three times daily. Inhalations. On the third day the stomach tube was used and two to three gallons of water given containing sodium chloride ℥viii., soda bicarb. ℥i., strychnia 1 gr., formalin ℥ss., and sugar 1½ lbs., repeated twice daily with half quantities of the salt. After four treatments there was general improvement. The membranes cleaned, the kidneys acted freely, also the bowels. There was a desire for food and water, and the oral breathing ceased. No further medical treatment was given, and the animal was sold fat three months later.

When so few cases of a given disease are met with, the development of a successful line of treatment may take a single practitioner many years, and I am writing with the hope that others may try the line of treatment indicated, instead of the usual drenching methods with drugs and rubbishy gruels, which often add to the lung complications and make a sort of sewage channel of the gastro-intestinal canal.

Acidosis.

Mr. C. Elphick stated: "It was believed that acidosis had some influence on other conditions, *e.g.*, sterility and abortion, and he asked whether acidosis might have some influence on malignant catarrh." The supposed acid condition of certain secretions in sterility, etc., is not the state called "acidosis." The latter consists in a tendency for the reaction of the blood and body fluids to swing to the acid side, and it would appear that in the malignant catarrh of cattle we have the very conditions which tend to bring about this state, and hence the use of sugar and soda salts in treating the above case. There are many diseases in animals the course of which would seem to favour the development of acidosis, but so far it has not been considered of sufficient importance for serious discussion in veterinary medicine.

The clinical condition described by Imrie, Hudson, and Stinson, as occurring in cows is, of course, a form of acidosis, but such cases are probably dependent on some endocrine disturbance, or some local conditions. Acidosis occurs in delayed chloroform poisoning and also in a starvation diet from lack of glucose—"starvation acidosis"—but here again we have a different series of events to deal with compared to those which take place in malignant catarrh. In any condition, such as malignant catarrh, in which there is considerable tissue waste, with diminution of natural secretions and excretions, the animal must have a great struggle to maintain the normal reaction of the blood, this being slightly on the alkaline side, a very slight change, one way or the other, being incompatible with life. "The range is extremely small and the factors which combine to maintain the reaction at its normal level are: the blood-salts, the respiration, the liver, the kidney and the intestines. All these factors are interdependent, so that if one fails more strain is thrown on the remainder."* Now I think it must be admitted that not a tissue in the body may escape serious damage in the course of malignant catarrh, as we see it, and how often must all the above functions be seriously impaired in any given case. The animal seems almost on fire, and yet it appears to be in urgent need of carbo-hydrate (glucose) to keep its body from smoking.

Dearer Horses.

"It is a somewhat strange commentary on the contention that the day of the horse is past that there never has been a time—certainly not in the recollection of the oldest living fox-hunter—when the prices of hunters have ruled so high as at present," says a writer in *The Manchester Guardian*. "This applies to the average animal as well as to the exceptional hunter about whom remarkable reports forestall his appearance at Tattersall's or Leicester.

"Before the war it was never necessary to pay more than £50 for suitable mounts for the hunt servants, though a little more might be given for a somewhat superior animal to carry the huntsman. Nowadays, however, when any well-known stud comes under the hammer it is nothing to find the average price working out at something like £300 and individual hunters of merit realising five or six hundred guineas, whereas thirty years ago £250 was regarded as a high figure for even an exceptional horse, the usual price being round about £150. It is surprising, therefore, that more people in England do not consider hunter-breeding on their own account instead of leaving this obviously profitable enterprise—even allowing for disappointments and misfits—to the Irish dealer, who in many cases thinks nothing of asking £200 for a green horse totally unversed in the difficulties of the hunting field."

*"Clinical Physiology," McDowall.

The Names of Worms.

By E. L. Taylor, B.V.Sc., M.R.C.V.S.,
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The changes in the names of parasitic helminths have been a source of wonderment, not to say annoyance, to everyone dealing with them. Particularly does this apply to such a person as the veterinary practitioner, who only occasionally comes across their mention in the general literature, and very naturally wonders why an old friend like *Strongylus gracilis* should suddenly appear under the name of *Trichostrongylus extenuatus*. At first sight, changes of this kind appear to be an unnecessary complication of what was always a wordy study, and the helminthologist may even be under suspicion of indulging in some kind of a game. A short account of the reasons for these changes may not be amiss here, and may remove the imputation that those who study parasitic worms are abnormal people, and peculiar in their ideas on the subject of nomenclature.

The changing of scientific names is not confined to parasitic worms, but is common to the whole field of zoology, and is a very necessary process whereby order is gradually becoming established in what was a bewildering chaos of names. The extent of the confusion which has obtained in the past becomes apparent when the literature dealing with any well-known species is examined, as an example of which I might cite the cestode *Tænia solium*. This worm has been referred to under no less than ninety different names since the year 1758.

One reason for the appearance of many of these names has been the independent discovery of the worm by different authors; the comparative isolation of the old-time workers is also largely responsible. But, apart from these reasons, scientific names were not given the respect which names in general should receive. No one would think of creating a new name for a spade when writing on that subject, yet scientific names often changed for no better reason than to substitute one which appeared a little more fitting, or sounded better.

To obviate this abuse of language, and bring about the very desirable state of affairs wherein each species should be known under one appellation only, a list of rules has been formulated by an international congress of scientists, to which all zoological nomenclature should conform. This code, known as the *International Code of Zoological Nomenclature*, is based upon rules laid down by Linnæus in the tenth edition of his *Systema Naturæ*, published in 1758, which publication is regarded as the starting point of consistent and orderly zoological nomenclature. An important item of the code deals with the determination of the correct name of an animal where more than one has been used, and states that the oldest published name as far back as the work mentioned above shall be the true name, providing that it was published, and accompanied by a description, that it had not been used previously for another animal and that the author applied the principles of binary nomenclature.

The wisdom of these conditions is not difficult to find; the impossible position of two animals with the same scientific name is self-evident; to give standing to any name which had not appeared in a recognised publication would greatly retard the final stabilisation; while such names as *Hydatidis solitaria peritonei cervi axis*, which try to describe the worm and its position as well as name it, are too unwieldy to warrant consideration, and do not fit in with the binomial system. With regard to right of name by priority, it might at first appear that common use would have been a better criterion and have led to less confusion in the choice of a name from any given list: but a name in common use in one country, or amongst one group of workers, frequently differed from that used elsewhere, and such a principle could not be applied in any international scheme. Other methods of deciding on the correct name had their disadvantages, and the principle of the choice of name by priority was thought to be both the fairest and the best for general application. This law is responsible for a great many of the alterations which have recently been made in the names of worms, but, as will now be understood, such changes are not by way of the introduction of new names but a return to earlier ones which have been wrongly ousted.

Another frequent cause of change in the names of worms might be mentioned. As a result of enquiry in helminthology, the number of species of parasitic worms has been shewn to be very much greater than was supposed. Between two thousand and three thousand species of parasitic Nematodes alone have been described, and accounts of new species appear in almost every publication of journals dealing with the subject. The existing genera of the old-time helminthologists were too few to hold such a large number of species. More than three hundred have, at one time or another, been ascribed to the genus *Strongylus*, and the use of genera of such wide limits would signify the absence rather than the employment of any classification, and render the work within the group much more difficult. On this account most of the older genera have been sub-divided, with a resulting change in the first, or generic, name only: *Strongylus contortus* becomes *Hæmonchus contortus*, and *Strongylus ovinus*, *Chabertia ovina*.

Sufficient has been said to shew that these changes are at least rational, and are leading to a proper system in which each species will be known under one and the same appellation in every country. In order that the procedure shall be the more rational, a note has been added to the rules stating that plenary power is conferred upon the International Commission on Zoological Nomenclature to suspend the rules as applied to any given case where, in its judgment, their strict application will clearly result in greater confusion than uniformity.

A list of the correct names of worms as now generally accepted, and some of the commoner synonyms, is appended. In some instances where the division of an old genus has been proposed but has not been generally accepted, both old and new generic names are given. While this list cannot be regarded as in any way complete or final and there are points on which expert opinion might differ, it should be of some assistance to the practitioner and to those who have not ready access to the literature of helminthology.

Nematodes.

Correct Name.	Synonyms.
Ascaridia galli	*Ascaris galli.*
	Ascaris inflexa.
	Ascaridia inflexa.
	Ascaridia perspicillum.
	Heterakis inflexa.
Ascaris [Parascaris] equorum	*Ascaris equi.*
	Ascaris megalocephala.
Ascaris lumbricoides ...	*Ascaris suum.*
	Ascaris suilla.
Bunostomum phlebotomum ...	*Strongylus radiatus.*
	Bunostomum radiatum.
Bunostomum trigonocephalum	*Strongylus cernuus.*
	Monodontus trigonocephalus
	Strongylus trigonocephalus.
	Sclerostoma hypostomum.
	Uncinaria cernua.
Chabertia ovina	*Strongylus ovinus.*
	Strongylus hypostomus.
	Sclerostomum ovinum.
Cooperia curticei	*Strongylus ventricosus.*
	Strongylus curticei.
Cooperia oncophora	*Strongylus ventricosus.*
	Strongylus oncophorus.
Dictyocaulus filaria	*Strongylus filaria.*
Dictyocaulus viviparus ...	*Dictyocaulus micrurus.*
Dioctophyme renalis ...	*Ascaris renalis.*
	Eustrongylus gigas.
	Ascaris visceralis.
Dirofilaria immitis	*Filaria immitis.*
Dracunculus medinensis ...	*Gordius medinensis.*
	Vena medinensis.
	Filaria medinensis.
Enterobius vermicularis ...	*Ascaris vermicularis.*
	Oxyuris vermicularis.
	Oxyurias vermicularis.
Habronema megastoma ...	*Spiroptera megastoma.*
	Dermofilaria irritans.
Habronema microstoma ...	*Spiroptera microstoma.*
	Dermofilaria irritans.
Habronema muscæ	*Filaria muscæ.*
Hæmonchus contortus ...	*Strongylus contortus.*
Heterakis gallinæ	*Ascaris papillosa.*
	Heterakis papillosa.
	Ascaris vesicularis.
	Heterakis vesicularis.
Hyostrongylus rubidus ...	*Strongylus rubidus.*
	Ostertagia rubida.
	Strongylus attenuatus.
Metastrongylus apri	*Ascaris apri.*
	Metastrongylus elongatus.
	Strongylus paradoxus.
	Strongylus suis.
	Metastrongylus paradoxus.
Muellerius capillaris ...	*Pseudalius capillaris.*
	Strongylus capillaris.
	Synthetocaulus capillaris.
Nematodirus filicollis ...	*Ascaris filicollis.*
	Strongylus filicollis.
	Trichostrongylus filicollis.

Correct Name.	Synonyms.
Œsophagodontus robustus ...	*Sclerostoma robustum.*
	Triodontus robustus.
	Pseudosclerostomum securiferum.
Œsophagostomum columbianum	*Hypostomum columbiana.*
Œsophagostomum dentatum ...	*Strongylus dentatus.*
	Sclerostoma dentatum.
	Œsophagostomum subulatum.
Œsophagostomum radiatum ...	*Strongylus radiatus.*
	Strongylus dilatatus.
	Œsophagostomum inflatum.
	Œsophagostomum bovis.
	Œsophagostomum vesiculosum.
Onchocerca cervicalis ...	*Spiroptera reticulata.*
Onchocerca reticulata ...	*Filaria reticulata.*
	Spiroptera reticulata.
	Spiroptera cincinnata.
Ostertagia circumcincta ...	*Strongylus vicarius.*
	Strongylus cervicornis.
Ostertagia ostertagi	*Strongylus ostertagi.*
	Strongylus convolutus.
Oxyuris equi	*Trichocephalus equi.*
	Oxyuris curvula.
	Oxyuris mastigodes.
Physocephalus sexalatus ...	*Spiroptera sexalata.*
Prostostrongylus rufescens ...	*Strongylus rufescens.*
	Synthetocaulus rufescens.
Setaria equina	*Gordius equinus.*
	Filaria equina.
Setaria labiato-papillosa ...	*Filaria labiato-papillosa.*
Strongylus equinus	*Sclerostomum equinum.*
	Strongylus armatus.
Syngamus trachea	*Fasciola trachea.*
	Syngamus trachealis.
	Syngamus bifurcatus.
	Syngamus sclerostomum.
Toxascaris leonina	*Ascaris leonina.*
	Ascaris cati.
	Ascaris leptoptera.
	Ascaris microptera.
	Toxascaris limbata.
	Toxascaris marginata.
Toxocara canis	*Ascaris marginata.*
	Belascaris marginata.
Toxocara mystax	*Ascaris cati.*
	Ascaris leptoptera.
	Ascaris alata.
	Belascaris mystax.
Trichinella spiralis	*Trichina spiralis.*
Trichonema ægyptiacum ...	*Strongylus tetracanthus.*
	Sclerostoma tetracanthum.
Trichonema (species) ...	*Cylichostomum tetracanthum.*
	Cylichostomum (species).
	Cyathostomum (species).
	Trichonema (species).
Trichostrongylus extenuatus	*Strongylus gracilis.*
	Strongylus extenuatus.
Trichostrongylus colubriformis	*Strongylus instabilis.*
	Strongylus subtilis.
	Trictrostrongylus instabilis.

Correct Name.	Synonyms.
Trichuris ovis	*Trichocephalus ovis.*
	Trichocephalus affinis.
Trichuris trichura	*Trichocephalus crenatus.*
	Trichocephalus apri.
	Trichocephalus dispar.
	Trichuris suis.
Triodontophorus serratus ...	*Triodontus serratus.*
	Triodontus intermedius.
Cestodes.	
Anoplocephala magna ...	*Tænia equina.*
	Tænia magna.
	Tænia plicata.
Anoplocephala [*Paranoplocephala*] *mamillana* ...	*Tænia mamillana.*
	Tænia globiceps.
Anoplocephala perfoliata ...	*Tænia equina.*
	Tænia equina perfoliata.
	Tænia perfoliata.
	Tænia quadrilobata.
Davainea proglottina ...	*Tænia proglottina.*
Diphyllobothrium latum ...	*Tænia lata.*
	Bothriocephalus latus.
	Dibothrium latum.
	Dibothricocephalus latus.
Dipylidium caninum... ...	*Tænia canina.*
	Tænia cucumerina.
	Tænia elliptica.
	Dipylidium ellipticum.
Echinococcus granulosus ...	*Tænia visceralis.*
	Hydatigena granulosa.
	Echinococcus veterinorum.
	Echinococcus polymorphus.
	Tænia echinococcus.
Hymenolepis diminuta ...	*Tænia diminuta.*
	Tænia flavopunctata.
	Tænia flavomaculata.
	Tænia varesina.
	Tænia minima.
Moniezia expansa	*Tænia expansa.*
Moniezia benedeni	*Tænia benedeni.*
	Moniezia planissima.
Raillietina echinobothrida ...	*Tænia echinobothrida.*
	Davainea echinobothrida.
Raillietina tetragona	*Tænia tetragona.*
	Tænia bothrioplites.
	Davainea tetragona.
Tænia hydatigena	*Hydatigena orbicularis.*
	Hydatigena globosa.
	Cysticercus tenuicollis.
	Tænia bovina.
	Tænia marginata.
Tænia [*Multiceps*] *multiceps*	*Hydatigena cerebralis.*
	Cœnurus cerebralis.
	Polycephalus cœnurus.
	Tænia cœnurus.
Tænia [*Multiceps*] *serialis* ...	*Cœnurus serialis.*
	Tænia serialis.
	Cœnurus cuniculi.
Tænia ovis	*Cysticercus ovis.*
Tænia pisiformis	*Hydatigena pisiformis.*
	Cystercercus pisiformis.
	Tænia serrata.
	Tænia novella.

Correct Name.	Synonyms.
Tænia saginata	*Cysticercus bovis.*
	Tænia mediocanellata.
	Tænia inermis.
Tænia solium...	*Cysticercus cellulosæ.*
	Tænia armata.
	Tænia cellulosæ.
Tænia tæniæformis	*Hydatigena tæniæformis.*
	Hydatigera fasciolaris.
	Cysticercus fasciolaris.
	Hydatigena fasciolaris.
	Tænia felis.
	Tænia crassicollis.
Thysanosoma actinioides ...	*Tænia actinioides.*
	Tænia fimbriata.
	Moniezia fimbriata.
Trematodes.	
Dicrocœlium dendriticum ...	*Fasciola lanceolata.*
	Distomum lanceolatum.
	Dicrocœlium lanceolatum.
	Dicrocœlium lanceatum.
Fasciola gigantica	*Distomum giganteum.*
	Cladocœlium giganteum.
	Fasciola gigantea.
Fasciola hepatica	*Distomum hepaticum.*
	Cladocœlium hepaticum.
Gastrodiscus ægyptiacus ...	*Gastrodiscus sonsinoi.*
	Gastrodiscus polymastos.
	Gastrodiscus minor.
Paramphistomum cervi ...	*Amphistomum cervi.*
	Amphistomum conicum.
	Paramphistomum gracile.
	Paramphistomum papillosum.
Acanthocephala.	
Macracanthorhynchus hirudinaceus	*Tænia hirudinacea.*
	Echinorhynchus gigas.
	Gygantorhychus gigas.
	Gygantorhynchus hirudinaceus

Future of the Melbourne Veterinary School.

The report of the committee which was appointed to inquire into the future of the Melbourne veterinary school has been adopted by the council of the University, and a deputation has been selected to place its recommendations before the Ministry. The committee recommended that teaching for the veterinary degree course should be continued in Melbourne up to the end of the third year, and that students should then go to Sydney for the fourth year. It was also urged that the University should continue to conduct laboratory, diagnostic, and reporting work, together with investigations of outbreaks of disease in animals, for the stock branch of the Department of Agriculture, with University officers, staff, and equipment as at present. The milk laboratory should also continue on present lines. Other recommendations were that there should be continuance of the facilities afforded to the research officers of the Commonwealth Science Industrial Research Institute up to the limits of the accommodation of the school, and an increase and extension of the endowment fund and other provisions for research work relating to matters of disease in animals by University officers. Finally, the committee proposed that a new Act be obtained providing for the above measures, and including provision for ten retainers of £1,500 per annum to veterinary practitioners located in country districts of Victoria.

Equine Strongylidiosis, its treatment; and Survey of Nematoda found in Horses at a Country bred Depôt, in India.

By Major H. ALLEN, R.A.V.C., Remount Depôt, Mona, Punjab, India.

INTRODUCTION.

Mona Remount Depôt is one of the receiving depôts for young stock horses and mules purchased in five breeding areas, including four provinces.

A large number of Strongylidiosis cases, a condition of the bowels set up by the adults and larvæ of members of the family Strongylidæ, come under treatment annually.

Some of the young stock, on arrival, are clinically typical of "worm cases," and examination of fæcal matter by Sheather's flotation method (concentrated sugar solution method) invariably reveals Strongyle ova.

The infestation is a mixed one of many families and genera, in particular Strongylidæ; a pure infection with a single genus has not yet been encountered.

In the few cases which have died, the cæcum and large colon exhibited marked pathological changes. Areas of their walls were thickened, and engorged with blood.

The mucous membranes of these regions were studded ("pepper box top" appearance) with small punctuated lesions, pointing to massive infestations. Nodules varying from the size of a small pin's head to that of a small pea were discernible, scattered throughout the mucous membrane of the cæcum, and upper portion of the large colon.

Larvæ were present free in the lumen of the cæcum and large colon, and varied in size owing to the fact that they represented different species of nematodes. These cases succumbed in a couple of days.

There is no doubt that the numerous encystment of larvæ of Strongylidæ in the intestinal wall is of serious moment.

SYMPTOMATOLOGY.

In the mild cases there are poor development, loss of condition, muscular wasting, rough coat and pot-bellies; foul smelling fæces, and sometimes periodic colic and diarrhœa.

In the severe cases (gross parasitism) the appetite was diminished, there was more loss of condition and muscular wasting, foul smelling diarrhœa; staggering gait and plaiting of legs was pronounced, presumably due to absorption of toxic worm products by the host.

Power of vision in one case was pronouncedly impaired.

TREATMENT.

Oleum chenopodium, and carbon tetrachloride (CCl_4) were used as recognised reliable anthelminthics.

Oleum chenopodium costs Rs. 2/4/- per ounce in India.

Dosage—20c.c. in 1½ pints of oleum lini for full aged horses (country breds).

Young stock horses—15 c.c. in 1 pint of oleum lini. Administered by means of the stomach tube.

Carbon tetrachloride costing Rs. 2/4/- per lb. Dosage 60—90 c.c. by stomach tube.

About ten ounces of water were passed down the tube before and after administering the drug.

Cases were fasted up to forty hours before treatment.

PROPHYLAXIS.

Due attention has been paid to the many points in this connection, in order that the maximum amount of benefit may be derived from the course of treatment.

1. Question of grazing.
2. Conversion of pastures into arable land.
3. Allowing land to lie fallow for a year.
4. Avoiding "sick" pastures.
5. "Stock rotation."

TABLE I.

The following animals were given carbon tetra-chloride per stomach tube.

The drug used was CCl_4 (Merek); extra pure from sulphur U.S.P.X.E. Merek, made in Germany; conforming to standard suggested by the Calcutta School of Tropical Medicine. *I.M.G.*, Vol. IX., No. 2, page 62.

Serial No.	Age Y.	Age M.	Period of Starvation.	Dose of Drug.	Time started to purge.	Period of purge.	Remarks.
1	4	8	36 hours.	90 c.c.	After 54 hours.	12 hours.	Purged well.
2	2	11	36 „	80 „	—	—	Did not purge, only pultaceous.
3	4	9	36 „	70 „	—	—	„ „ „
4	2	4	38 „	60 „	After 18 „	12 hours.	Purged well.
5	5	4	40 „	80 „	„ 19 „	29 „	„ „
6	3	7	40 „	60 „	„ 19½ „	24 „	„ „
7	5	8	40 „	70 „	—	—	Did not purge, only pultaceous.
8	3	7	40 „	65 „	—	—	„ „ „
9	3	8	40 „	65 „	—	—	„ „ „
10	2	10	40 „	65 „	After 32 hours.	39½ „	Purged well.
11	2	9	40 „	80 „	„ 24 „	45 „	„ „
12	1	10	40 „	80 „	„ 54½ „	34 „	„ „
13	3	0	40 „	80 „	„ 29½ „	20½ „	„ „
14	2	2	40 „	80 „	„ 46½ „	24½ „	„ „
15	2	8	40 „	80 „	„ 18 „	24 „	„ „
16	2	9	40 „	80 „	„ 18 „	24 „	„ „
17	3	10	40 „	80 „	„ 62 „	16 „	Laxative action, only pultaceous.
18	1	8	40½ „	80 „	„ 45½ „	28 „	„ „ „
19	2	1	40½ „	80 „	„ 47 „	22 „	Purged well.
20	2	3	40½ „	80 „	„ 46 „	23 „	„ „
21	2	8	40 „	80 „	„ 35 „	15 „	Laxative action, only pultaceous.
22	2	7	40 „	80 „	„ 48 „	12 „	Slight laxative action.

XUM

6. Prevention of overstocking, as it is a fruitful means of intensification of worm disease.
7. Young stock not to accompany or follow older stock on pasture, as the former are highly susceptible to the disease, and the latter usually act as " carriers " of worms.
8. Cleanliness. Manure should not be allowed to collect in paddocks for more than three days.
9. Concentrate on protection of the young stock. The best method to adopt is a good curative treatment.

List of Nematoda in horses at Mona Remount Depôt, Punjab (India), identified by the Helminthologist, Imperial Institute of Veterinary Research, Muktesar (India).

Parascaris equorum (Goeze, 1782).
Oxyuris equi (Shranky, 1803).
Strongylus edentatus (Looss, 1900).
Trichonema insighe (Boulenger, 1917).
Poteriostomum imparidentatum (Quiel, 1920).
Strongylus equinus (Müeller, 1780).
Habronema microstoma (Schneider, 1866).
Triontophorus minor (Looss, 1900).

Tuberculosis Order Results in Dumfries.

At a recent meeting of the Agricultural Committee of the County Council of Dumfries, a report was submitted by the County Clerk in regard to the administration of the Tuberculosis Order during the quarter ended 31st December.

The Chairman said it would be seen that the number of cows examined by the county veterinary inspector as suspected of tuberculosis was 65. Of these, 53 appeared to be suffering from tuberculosis. The total compensation paid was £283, of which £212 was paid by the Government, leaving £70 15s. to be paid out of the county funds. The Chairman said he had made inquiries from the veterinary inspector as to what the results were, over and above those shown in the report, in regard to the continued examination of cows for tuberculosis, and he was informed that there was now nothing like the number of really bad cases they originally had when they first started examination. He did not wish to infer that they were getting towards the end of the work, but they were working, if not towards perfection, at least towards a higher standard.

Table II.

The following animals were given ol. chenopodium per stomach tube in ol. lini.

Serial No.	Age Y.	Age M.	Period of Starvation.	Dose of drug.	Time started to purge.	Period of purge.	Remarks.
1	3	8	36 hours.	20 c.c. in ½ pt. ol. lini.	After 24 hours.	2 days.	
2	4	0	36 „	„	„ 24 „	2 „	
3	4	0	36 „	„	„ 24 „	2 „	
4	3	8	36 „	„	„ 24 „	2 „	
5	4	0	36 „	„	„ 24 „	2 „	
6	4	10	36 „	„	„ 24 „	2 „	
7	2	1	36 „	„	„ 24 „	2 „	
8	5	6	24 „	„	Did not purge.		
9	5	6	36 „	„	After 12 hours.	2 days.	
10	5	5	36 „	20 c.c. in 2 pts. ol. lini.	„ 24 „	3 „	
11	2	1	36 „	20 c.c. in 1½ pts. ol. lini.	„ 24 „	2 „	
12	1	8	36 „	„	„ 12 „	24 hours.	
13	2	9	36 „	„	„ 24 „	20 „	
14	2	8	36 „	„	„ 15 „	20 „	
15	2	2	36 „	„	„ 12 „	22 „	
16	1	8	36 „	„	„ 10 „	24 „	
17	1	1	39 „	15 c.c. in 1 pt. oil. lini.	„ 12 „	42 „	
18	1	1	39 „	„	„ 12 „	42 „	
19	1	1	39 „	„	„ 6 „	49 „	
20	1	7	39 „	„	„ 12 „	52 „	
21	1	3	39 „	„	„ 12 „	42 „	
22	1	3	39 „	„	„ 12 „	60 „	
23	1	6	39 „	„	„ 12 „	48 „	
24	1	3	39 „	„	„ 12 „	42 „	
25	1	1	39 „	„	„ 12 „	48 „	
26	2	3	39 „	20 c.c. in 1 pt. ol. lini.	„ 8 „	40 „	
27	1	5	40 „	15 c.c. in 1 pt. ol. lini.	„ 12 „	43 „	
28	1	0	40 „	„	„ 14 „	43 „	
29	1	4	40 „	„	„ 14 „	43 „	
30	1	5	40 „	„	„ 14 „	42 „	
31	1	3	40 „	„	„ 12 „	40 „	
32	6	0	40 „	20 c.c. in 1½ pts. ol. lini.	„ 2 „	50 „	
33	2	10	40 „	„	„ 24 „	48 „	
34	4	0	40 „	„	„ 4 „	72 „	
35	6	0	40 „	„	„ 22 „	50 „	
36	1	7	40 „	„	„ 20 „	35 „	
37	1	8	40 „	„	„ 22 „	32 „	

The Veterinary Record.

23rd February, 1929.

TERMS AND CONDITIONS OF MEMBERSHIP, N.V.M.A.

From communications which reach this office from time to time, it is apparent that the terms and conditions of membership of the Association are not fully understood by all our members. We desire, therefore, to take this opportunity of making the position quite clear. To this end, we direct attention to the following Articles of Association which govern the rights of members and subscriptions :—

Article 17. Every member of the Association who has paid his subscription for the current year shall be entitled to attend and vote at every General Meeting. He shall also be entitled to have sent to him post free a copy of the official publication (if any) of the Association as and when published . . . . . .

Article 29. Members entering the Association shall pay an annual subscription of Two pounds two shillings or such sum as may be decided at a General Meeting from time to time. The first payment of such subscription shall become due immediately on appointment, and each subsequent payment shall become due on the first day of January of each year.

Article 30. If the subscription of a member shall be in arrear for three months he shall cease to be entitled to receive the several publications of the Association or to attend or vote at any General Meeting of the Association. If the subscription of a member shall be in arrear for two years he shall cease to be a member of the Association.

It follows from the above that a member's subscription is paid solely in respect of membership, and that if it is not paid within three months, the Council has the power to cease to supply him with the *Veterinary Record* or other publications of the Association after due notice has been given, such publications being sent *free* to members. The crux of the matter is, that although the despatch of the *Record* to a member may be withheld, his membership continues until the expiration of the statutory period for which a member may remain in arrears, namely, two years. The fact that the *Record* is stopped does not mean that membership is thereby automatically terminated. Where resignation is decided upon by a member, he should bear in mind that membership runs from January to December (inclusive) and that to carry out his intention he must give written notice to the General Secretary by December 1st of that year, as he undertakes to do when signing the form of application for admission to membership; otherwise, it is assumed that continuance of membership is intended. Furthermore, before a member's resignation can be accepted by the Council all outstanding subscriptions, including that for the current year, must be fully paid.

We think that for the purpose of emphasis it would be well to summarise the position by recapitulating the following points :—

(i.) Membership runs from January–December (inclusive).

(ii.) The annual subscription is £2 2s. 0d. payable on January 1st. This is paid solely in respect of membership and is not for the purchase of the *Veterinary Record*. The *Veterinary Record* is sent to members free of charge, provided the current membership subscription is paid promptly as it falls due.

Where a member's subscription is not paid within three months of the due date, he ceases to be entitled to receive the *Record* and other publications of the Association until such time as the subscription has been paid. One month's notice of suspension of despatch of the *Record* is, however, given. The fact that the despatch of the *Record* has been suspended does not mean that membership is thereby automatically terminated.

(iii.) In the event of a member wishing to resign, written notice should be sent to the General Secretary by December 1st of the year at the end of which it is desired that the resignation shall take effect. Otherwise it is assumed that a member intends to continue his membership for the following year.

The Council has under consideration the question of placing each member in possession of a summary of the Articles of Association of the Association, but in any event enquiries will be welcomed at the office concerning any point in relation to his membership on which any member may desire to be enlightened.

Thirty-Seven Years as Secretary.

Midland Division's Tribute to Mr. H. J. Dawes.

No man has held more steadfastly to the ideal of the achievement of unity within the profession than Mr. H. J. Dawes, F.R.C.V.S., of West Bromwich, and to that end he has thrown himself whole-heartedly into the life of the two Associations—each great in its sphere—of which he is the esteemed Honorary Secretary.

Mr. Dawes' work in that capacity for the "National" Association is known and appreciated by every member of the parent body, but it is, after all, the prerogative of the Midland Counties Veterinary Medical Association to claim him as its own, and it was the pleasure of its members, at their Annual Meeting on February 8th, to present him, in recognition of his really remarkable and unrivalled record of thirty-seven years' service for the Division as its Honorary Secretary, with a gold cigarette case and a handsome silver rose bowl. The former bore the inscription: "Presented to Mr. H. J. Dawes, F.R.C.V.S., by the Midland Counties Veterinary Medical Association, in appre-

ciation of his long and valued services as Secretary. February 8th, 1929."

In making the presentation, the full account of which will appear in the report of the meeting of the Division to be published in an early issue, enthusiastic reference was most justifiably made to the valuable assistance which Mrs. Dawes has rendered her husband in creating so notable a record of faithful service in office. The esteem in which their Hon. Secretary is held by his fellow-members was exemplified not only by the fact that a limit subscription should have raised a sum which indicated the participation of practically every member, but by the affectionate and enthusiastic verbal tributes which were paid to the recipient of the Association's gifts.

Joining the Midland Counties Veterinary Association in 1887, Mr. Dawes is now one of only five or so members surviving from that date. Throwing himself into its objects and interests with great enthusiasm, he was elected Secretary in 1891, and, with the exception of two years, when he held the position of President, he has remained its active and valued Secretary up to the present time—a period during which, thanks largely to his own unstinted efforts, he has seen the membership trebled.

It is fitting both that this expression of the Division's appreciation should have been initiated and carried through by the present President, Mr. J. L. Cormack, and that his request for participation should have met with immediate and universal response.

CLINICAL AND CASE REPORTS.

From a Case Book.

By W. E. Blackwell, M.R.C.V.S., Towcester.

Equine Contagious Abortion.

Subject.—Shire mare, "Bluebell."

History.—1924, slipped foal eight weeks before due; 1925, slipped foal four weeks before due; 1926, barren; 1927, slipped foal twelve weeks before due.

I attended this mare on each occasion of foaling. The record is, therefore, correct. Professor Wooldridge's excellent book states, on page 76, "A large number of mares in a stud may abort one year, and the majority will produce healthy foals the following season." The acquired immunity which we can observe in cattle does not appear to eventuate in the equine species, if this case is at all typical.

Black Quarter in Ewes.

Subject.—Cheviot ewe with two lambs a fortnight old.

History.—Noticed the previous evening looking empty, and alone. Next morning found dead. Owner had lost four ewes in this way, but only this one since he changed their pasture. The first three seemed "blown" before he found them dead. The lot had succumbed within the past four weeks.

The knackerman was proceeding to skin the fourth ewe when I arrived.

Post-mortem Symptoms.—One side of the neck and one shoulder region had the typical appearance. Crepitus was not particularly well marked.

The bowels were intensely inflamed. The contents were thick, slimy and chocolate coloured. Their quantity was not great. This is the first case of black quarter I have seen in ewes.

Castration by the Burdizzo.

A client who had purchased one of these instruments asked me to use it on some calves. If I may say so, without boasting in any way, I think the operations were performed carefully and skilfully. I have not used it since, but I was glad of the opportunity to test the method. These were my conclusions, after seeing the results.

1. The calf has to be thrown. I regard this as a disadvantage.
2. Two men are required besides the operator. This is another disadvantage.
3. The cord was crushed in one place only, for ten seconds. I should imagine this to be very painful.
4. For one month afterwards both testicles were very much enlarged—as big as two cocoanuts. I regard this as the biggest drawback—even the school children discussed the peculiarity.
5. In six weeks' time the testicles had quite atrophied and appeared as pieces of cartilage-like material on the roof of the scrotum. Their size was about that of a walnut.

The method impressed me in the following way:—

1. As *the* method for colts with inguinal hernia.
2. There is no wound and thus no fear of sepsis, scirrhous cord or tetanus. Here is a big advantage.

I lay no claim to any special gifts or virtues, but I do think every member of our profession should regard it as his solemn duty to record something about his work at least *once a year*. No literary gifts are needed—the plain, truthful, unvarnished clinical record is worth all the "highbrow" material ever committed to print.

Enormous Tuberculous Enlargement of the Liver.

By Hugh Begg, F.R.C.V.S., Hamilton.

Subject. A four-year-old Ayrshire bull, dealt with under the Tuberculosis Order as a case of "chronic cough, etc."

The liver was represented by an enormous single-mass tumour, which had evidently been supported by strong adhesions to the peritoneum over a large area.

As it lay on the floor on its flat posterior aspect the appearance of its convex surface resembled a large tortoise but lighter in colour, and with a ring of normal-coloured liver tissue around the free border.

It measured 24in. by 22in. by 12in., and weighed 132 lbs. When cut into, several large abscesses were disclosed, but most of the bulk was composed of caseous deposit.

Two-thirds of the flat under surface of the mass was covered by normal-looking liver tissue 3in. deep, and the hepatic lymphatic gland was greatly enlarged.

The lungs had several soft tuberculous lesions, and there were deposits on the pleura and peritoneum. The kidneys appeared to be normal and the carcase was a fairly heavy one.

ABSTRACTS.

[Osteitis Fibrosa (Osteoporosis), with Special Reference to Mineral Deficiencies in Foods. STURGESS, G. W. (1928). *Administration Report of the Government Veterinary Surgeon, Ceylon, for* 1927].

This is the most important equine disease of Ceylon. Until recently it was diagnosed as rheumatism, although Sturgess states that he has always held that it is osteoporosis.

It probably affects 10 per cent. of the horses in Colombo, and occurs in all classes but to a greater extent in those used for racing than in general utility animals. It is seen chiefly in horses from 2½ to 4 years old, and affects either sex.

Very little horse breeding is carried out in Ceylon and those bred are undersized and poorly developed. Ponies are, however, bred on one or two small adjacent islands, which are small coral attols, and although they live entirely on natural pasture they are superior to the horses bred locally. All the other horses in Ceylon are imported from Britain, Arabia, Australia or South Africa.

SYMPTOMS.

The symptoms are marked stiffness, with or without lameness, associated with gradual emaciation and certain changes in the bones. The course of the disease is afebrile. The urine is acid.

LESIONS.

The author points out that co-incident with the removal and rarefaction of the bony tissue there is an extensive production of fibrous tissue, which results in enlargement. The term osteoporosis is not, therefore, an exact description of the disease, but it is used for convenience.

If there is lameness, the articular surfaces concerned are eroded. The bones are soft and fragile and are easily fractured. The bones of the lower jaw usually become very much enlarged, and in a lesser degree the facial bones undergo the same change.

ETIOLOGY.

Various theories have been propounded. One involves the existence of a specific infection. This theory was largely based on the fact that the disease became widespread in South Africa on two separate occasions, and that it has been known to break out in stables where diseased horses were accommodated.

Other views as to causation could explain the occurrence of these epizootics. Objections to the theory are:—

(i) Affected horses recover spontaneously when taken into a "free" district.
(ii) The disease is not seen in foals and yearlings.
(iii) The incidence is low in old horses and common in two to four-year olds.
(iv) The foals of affected mothers are healthy.
(v) Artificial manuring and drainage lessen the number and severity of the cases.

THE DEFICIENCY THEORY.

There appears to be no cogent argument against the theory that the disease is due to an actual deficiency in the diet. In Ceylon it has a regular incidence without fluctuation. In Norway, the disease has occurred after dry summers in districts deficient in calcium and phosphorus, with the result that in these conditions (of low rainfall) calcium and phosphorus are deficient in the fodder.

In Ceylon the diet of horses has always been principally cereals and cereal products. At one time paddy (unhusked rice) with or without gram (chick pea) or wheat bran were given. Later, oats, oat straw, chaff and bran have been fed. Bran has always figured largely in the rations.

All these foods are very deficient in lime salts and rich in phosphoric acid.

The administration of lime and alkaline treatment has always been beneficial. In those stables in which the addition of lime to the water has been regularly carried out and attention has been given to the feeding, there has been little or no osteoporosis.

A point which has been raised against the food deficiency theory is that in some parts of the world the disease occurs most often in stables in which expense is given the least consideration.

Expensive feeding is, however, not necessarily good feeding, and very often it means high cereal feeding. Cereals usually contain a low percentage of calcium with an excess of phosphorus.

Meadow hay is unknown in Ceylon. The available local grasses grow on the roadsides or on swampy land. They are looked upon with disfavour by owners and fed fresh in such small quantities as 6 to 7 lbs. per day.

Lucerne hay is imported and is sometimes given in amounts up to 4 lbs. a day when specially advised, generally by a veterinary surgeon. It is, however, regarded as a luxury.

WATER SUPPLY.

The water supply in Ceylon is very soft.

Very soft water in Gt. Britain contains 5 parts calcium carbonate per 100,000.

Hard water in Gt. Britain contains 10-30 parts per 100,000.

Very hard water in Gt. Britain contains over 30 parts per 100,000.

Colombo water contains 0.31 parts per 100,000.

MINERAL MATTERS IN GENERAL.

Lime is the most important constituent, since, in combination with phosphoric acid, it forms, as calcium phosphate, 85 per cent. of bone ash.

Balance of the mineral content is essential, as excess of some minerals is as dangerous as deficiency. In the absence of sufficient calcium, excess of phosphoric acid may result in slow poisoning by unrestrained phosphorus assimilation. The following are average amounts for the lime and phosphoric acid contents in certain Ceylon food stuffs:—

	Calcium Oxide.	Phosphoric Acid.
Paddy	15	100
Gram	50	100
Bran	9	100
Mauritius grass grown in Ceylon	.26	.84

EXPERIMENTAL WORK.

In 1925 it was decided that experiments should be carried out in order to ascertain if the disease could be induced in horses fed on special diets. The experiments detailed in the report were commenced on the 1st January, 1926, and discontinued on the 31st July, 1927.

Six unbroken pony stallions, four to six years old, were obtained from Delft Island—one of the coral attol islands mentioned in the report. Twelve to thirteen-hand ponies have been bred on Delft Island for at least 200 years, and the disease is unknown there. The ponies selected were examined while they were still on the island, and found to be free from any signs of osteoporosis. They were conveyed to the mainland of Ceylon in an open boat which had not previously been used to transport horses. They were brought to Colombo in cattle trucks in order to avoid any contact with horses or the possibility that other horses had previously been carried in the vehicles. They were taken to special "clean" disinfected stables with concrete floors in Colombo, and about two months later were taken to special stables in the Government Dairy School where they remained throughout the remainder of the experiments. At the Dairy School they were kept in an open-fronted lean-to shed divided into six loose boxes by means of bamboo poles. Intimate contact between neighbours was thus possible. Two grooms cared for the six ponies and grooming utensils were used indiscriminately for all the ponies.

FOOD SUPPLY.

The bran, chaff, linseed and oats used in the experiments were analysed and found to be of similar composition to average European samples.

Mauritius grass used was from the Government dairy and grown on land heavily dressed with cattle manure.

No data are available as to the actual amounts or ratio of the calcium and phosphoric acid requirements for horses. About equal quantities of calcium and phosphorus are present in mares' milk, and as this is an ideal ration for growing animals it is reasonable to use its analysis for purposes of comparison.

In the experiments detailed below the author considered that the fresh-grown grass contained an ample supply of vitamins. Guinea-pigs fed on a diet of oats, bran and the Mauritius grass, grew and reproduced normally.

The ponies were constantly examined at the trot for signs of lameness and stiffness, and the inferior maxillary and facial bones were constantly palpated throughout the experiments to detect abnormality.

The accompanying table shows the diets upon which the six ponies were placed.

Pony No. 1.

During the first four months the animal showed little change in condition. Thereafter, it became gradually thinner. It did not show any perceptible enlargement of the inferior maxillary bones, but the gait became weak. Nine months after the commencement of the experiment, it slipped at exercise and fractured its spine in the lumbar region.

The bones, especially the ribs, were found softened, and the stifle and elbow joints showed typical lesions of osteoporosis.

Pony No. 2

Four months after the commencement of the experiment there was no change in condition. After nine months, the animal was in very good condition and moving very freely, but there was undoubted enlargement of the submaxillary and very slight bulging of the facial bones. A month later the condition was the same. This state corresponds with a type of case met clinically in which the jaw bones show undoubted enlargement while the horse remains in good condition and may continue to move without lameness for months. After ten months the diet was altered (2a) in order to reduce the daily intake of calcium oxide. The pony then began to lose condition and became very lame with the characteristic stiff lameness and enlargement of the face and jaws.

The diet was then changed (2b) and very slight improvement in condition occurred, but the head and jaws continued to enlarge and the lameness and stiffness remained. The milk was discontinued in six weeks on the ground of

No. of Pony and Diet	Mauritius Grass.		Bran	Chaff	Oats	Milk	Linseed	Bone Meal	Calcium Lactate	Juice of Lime Fruits	CaO	P_2O_5	Actual Excess of P_2O_5 over CaO	Ratio of CaO to P_2O_5
	Amount in Grammes	Grammes of dry material												
1	4,540	908	4,540	—	—	—	—	—	—	—	9·16	129·7	120·5	1 : 14
2	4,540	908	4,540	—	—	—	—	—	56·7	—	19·6	129·7	110·5	1 : 6·5
2a	4,540	908	4,540	—	—	—	—	—	—	—	9·16	—	—	1 : 14
2b	4,540	—	2,270	2,270	—	571 cc.	—	114	—	—	—	—	—	—
3	4,540	908	4,540	—	—	—	—	56·7	—	—	28·16	142·1	113·96	1 : 5
3a	4,540	908	4,540	—	—	—	—	—	—	—	9·16	120·5	—	1 : 14
3b	4,540	908	2,270	2,270	—	—	—	114	—	—	—	—	—	—
4	—	—	4,540	—	—	—	—	56·7	—	2	26	134·9	108·9	1 : 5
4a	—	—	4,540	—	—	—	—	56·7	—	2	—	—	—	—
4b	—	—	4,540	—	—	—	—	—	—	—	—	—	—	—
5	—	—	4,540	—	—	—	—	—	—	—	6·8	122·1	115·3	1 : 18
5a	—	—	4,540	—	—	—	—	—	—	2	—	—	—	—
6	9,080	1,816	227	1,816	908	—	227	28·35	—	—	19·05	37·0	17·95	1 : 2
6a	9,080	1,816	227	1,816	908	—	227	56·7	—	—	—	—	—	—

expense. At the eighteenth month the head and jaws had reached such a size that the mouth could not be properly closed, and grass could not be chewed, and there was difficulty in breathing. The animal was destroyed at the nineteenth month.

At autopsy, the bones of the head were so soft that a finger could be forced into them with a little pressure. All the joints showed typical lesions.

Pony No. 3.

At the ninth month the condition was good. The legs moved freely but there was distinct enlargement of the submaxillary bones on palpation. At the eleventh month the diet was changed (3a). Condition was then lost and was very noticeable after six weeks. At the fourteenth month there was stiffness, lameness, enlargement of the submaxillary bones and bulging of the facial bones. The diet was again altered (3b). Condition and gait improved but the bones in the head continued to enlarge; at the sixteenth month, however, the gait was as bad as ever. The pony was destroyed at the nineteenth month and showed typical lesions in the head bones and joints.

Pony No. 4.

The animal was healthy at the ninth month and the lime juice was omitted from the diet. At the fifteenth month it was still healthy and bone meal was omitted from the diet. At the seventeenth month there was slight loss of condition, slight enlargement of the inferior maxillary bones and difficulty in rising. Towards the end of this month the pony got cast in the box and fractured its spine. At autopsy the lesions were typical, the stifle and shoulder joints being most severely affected.

Pony No. 5.

The pony was healthy at the fourth month, and while it was emaciated at the ninth month, there was no lameness or perceptible enlargement of the submaxillary or facial bones. At the tenth month two lime fruits were added to the diet. A month later there was stiffness and lameness and enlargement of the submaxillary bones. On pressing firmly on one of the ribs with the thumb it broke with a sound like that of breaking a sodden stick. The animal was destroyed at the end of the tenth month when it was so stiff that it could hardly move and was unable to rise from the recumbent position.

Pony No. 6.

This pony was considered to be the control. With the grass available it was difficult to arrange a ration in which the calcium oxide and phosphoric acid were equal in amount. After fourteen months there was a slight suspicion of commencing enlargement of the inferior maxillary bones but there was no certainty about this. The bone meal was on that account increased to 56.7 grams per day. The submaxillary bones showed no further increase in size, and the animal remained in perfect health in every other way. It is probable that the suspicion entertained after fourteen months was unfounded. The pony was sold healthy after twenty months' observation.

Discussion of Results.

The author considers that the possibility of infection by contact from outside sources was excluded, but while it may be admitted that the occurrence of an infection appears to be unlikely, it is not possible to agree that such an event was impossible.

The results appear to indicate that the disease occurs in horses fed on diets containing minimum quantities of calcium and heavy excess of phosphoric acid.

The article is well illustrated and may be missed by those interested on account of its burial in an administration report.

W. A. P.

[**A Specific Treatment for Johne's Disease.** Chazeau and Musso (*La Semaine Vétérinaire*, 1928, June 7th, 43e annee, No. 21, pp. 243—4)].

The authors summarise the results of the use of a methylic paratubercle antigen, made in a manner similar to that used by Bosquet and Nègre in the preparation of methylic tubercle antigen, from the use of which success is claimed in the treatment of tuberculosis in the human subject.

Incorporated in the antigen are emulsions of organisms found in cases of Johne's disease associated with *B. Johne.*

The use of the preparation during the past two years indicates that:—

1. Young animals are cured rapidly, mostly after one injection of the preparation.
2. Adult cattle recently infected are cured rapidly after 2—4 injections; the more recent the infection, the better the results. Animals infected for more than eight weeks require prolonged treatment.
3. Only partly successful results are obtained in animals infected for some months. There is apparently no change in the lesions in such animals after prolonged treatment.

[**Hexachloraethan against Distomatosis in Cattle.** Drs. L. de Blieck and E. A. R. F. Baudet (*Overdruk uit Het Tijdschrift voor Diergeneeskunde.* Deel 55. Aflevering 9 Jaargang, 1927.]

In a summary on the study of the treatment of this disease the authors say that as treatment with carbon-tetrachloride sometimes causes intoxication in cattle, they carried out experiments with hexachloraethan against distomatosis in cattle. The results were successful. The dose (one capsule at 10 grammes per 25 kilo grammes body weight) is to be distributed over four days.

Each morning the fasting animal should receive a quarter of the dose. Food should not be given until 2—3 hours afterwards. During the treatment oily substances should be avoided.

The National Pony Society.

At the Council meeting of the National Pony Society, held on the 1st February, it was reported that a very good entry had been received for all sections of the 30th Spring Show at the Royal Agricultural Hall on March 1st and 2nd, viz.:—

Polo Pony Breeding Classes, 74 ponies; Polo Pony Riding Classes, 92 ponies; Welsh Classes, 14 ponies; Shetland Classes, 26 ponies; Mountain and Moorland Classes, 31 ponies; Groups of Three Mountain and Moorland Ponies (three classes), 10 groups.

XUM

ADMINISTRATION REPORT.

[Ceylon. Report of the Government Veterinary Surgeon for 1927. (G. W. STURGESS).]

The department consists of two European Officers, eleven Assistant Veterinary Surgeons with India qualifications, eight Stock Inspectors, two Farm Managers and laboratory and office staff.

INFECTIVE DISEASES.

From the fact that certain diseases were in existence, but in very small numbers, it is not clear whether the cases reported were encountered more or less accidentally or if they represent the extent to which they occurred on the Island.

There were no cases of rinderpest ; 3,621 cases of foot-and-mouth disease occurred with a mortality of 1.5 per cent. Surra accounted for two deaths and piroplasmosis for 27 out of 30 cases. Twenty cases of canine piroplasmosis were diagnosed. Anaplasmosis in a cow was diagnosed and verified by the Chief Veterinary Officer, Union of South Africa. There were 20 cases of anthrax, 12 of hæmorrhagic septicæmia, 5 of blackquarter and 69 of rabies.

An outbreak of poultry disease considered to be either fowl plague or the " Newcastle Disease " reported by Doyle, apparently gave serious trouble, but there is no mention of the number of deaths that occurred.

Specimens of ticks, flies, and helminthes were forwarded to European authorities for verification and are mentioned in the report.

Accounts are given of the work of the Government Dairy, Colombo and of its branch farm, which are in the charge of the Veterinary Department.

The bulk of the report consists of an account of an investigation into equine osteoporosis which is reviewed in the Abstracts Section of this issue.

TUBERCULOSIS IN RABBITS.

" Mr. David Coull, veterinary surgeon and meat inspector, Buckie, seen by our representative to-day," states the *Edinburgh Evening News* of 14th January. " said he had communications from critics questioning his statements regarding the prevalence of tuberculosis in rabbits and poultry. He had ample bacteriological proof that many rabbits he examined were affected with tuberculosis. Rabbits were very susceptible to tubercle bacillus. Regarding the increase in poultry in this country since the War, Mr. Coull explained that tuberculosis was more prevalent because there were now hundreds of poultry as compared with tens pre-war, owing to poultry farming being taken up extensively on a commercial scale. There were as many as 2,000 poultry on one farm he knew where none existed before the War, and if one fowl were affected it would consequently affect larger numbers."

" Regarding the effect of weeding out tuberculous cattle from dairy herds, Mr. Coull added that in testing one herd 50 per cent. failed to pass the tuberculin test. These were immediately weeded out, and their places taken by tested cattle. Six months later the whole herd was again tested. This time every cow passed the test, showing that it was possible to keep dairy herds clear of tuberculosis. In another herd under his notice 30 heifers, intended to be added to the dairy stock, which had been brought up from a tuberculin-tested herd and fed on tested milk, on being tested showed only one heifer that failed to pass the test."

DIVISIONAL REPORTS.

Royal Counties' Division, N.V.M.A.

ANNUAL MEETING AND DINNER AT READING.

Despite a disappointly-long list of absentees, this year's Annual Meeting and Dinner of the Royal Counties' Division, which was held at the Great Western Hotel, Reading, on 25th January, fully maintained the reputation of the long series of Reading meetings as occasions of great social enjoyment.

The President, Mr. J. R. Hewer, occupied the Chair, and there were also present Messrs. J. Bell, R. E. C. Bullen, J. C. Coleman, Captain H. B. Collet, Mr. J. A. Craft, Major J. J. Dunlop, Captain T. M. C. Hunt, Major H. Kirk, Captain W. L. Little, Mr. G. P. Male, Major F. J. Taylor, Colonel G. K. Walker, Messrs. Walter Western, F. W. Willett, J. Willett, R. A. Willett and H. Bell (Hon. Secretary), with the following visitors :—Messrs. J. J. Aveston, C. W. Howard, C. P. Inglis, Major R. F. Wall and Mr. A. E. Ward.

The *minutes* of the 1928 Annual General Meeting, having been published in the *Record*, were taken as read and were confirmed.

CORRESPONDENCE.

(1) Letters of apology for unavoidable absence from Captain W. A. Austin, Captain A. Barr, Mr. J. Baxter, Captain T. J. Bosworth, Dr. O. Charnock Bradley, Professor J. B. Buxton, Mr. J. Carless, Mr. J. H. Carter, Major A. C. Duncan, Major G. W. Dunkin, Mr. C. Elphicke, Mr. R. E. Glover, Principal F. T. G. Hobday, Dr. P. P. Laidlaw, Major H. G. Lepper, Mr. T. W. Lepper, Captain J. M. Lund, Mr. B. A. Maguire, Mr. J. W. McIntosh, Major-General Sir John Moore, Captain W. E. Phipps, Veterinary-Major G. Rees-Mogg, Captain E. B. Reynolds, Mr. E. E. Seldon, Lieut.-Col. P. J. Simpson, Lieut.-Col. P. W. Dayer-Smith, Major F. B. Sneyd, Mr. S. H. Slocock, Major R. C. Tennant, Captain W. K. Townson, Mr. F. W. Trewin and Professor G. H. Wooldridge.

(2) From Major R. C. Catmur, late Hon. Secretary of the Division, deeply regretting his inability, through continued illness, to attend, and expressing the hope that the meeting and dinner would be conspicuously successful.

(3) From the Secretary of the National Horse Association, acknowledging the payment by the Division of its affiliation fee, and expressing pleasure at the Division's intention to be nominated as an affiliated body.

(4) From the Secretary of the Royal Sanitary Institute, inviting the Division to send delegates to the Fortieth Annual Congress and Exhibition of the Institute, to be held at Sheffield from July 13th—20th, 1929. It was agreed to send a delegate, and the President was unanimously elected to represent the Division.

(5) From the Secretary of the National Veterinary Medical Association, enclosing a resolution relative to the proposal of the Council, N.V.M.A. to alter the appropriate Bye-law in order to amend the constitution of the Council by the addition of 25 members elected from and by the general body of members of the Association. This resolu-

tion had been placed before an Extraordinary General Meeting of the Association, but that meeting decided to send it down to the Divisions for discussion and report.

[This circular letter and resolution appeared in last week's issue of the *Veterinary Record* (*vide* Report of Meeting of Mid-West and South Wales Division, page 140).—ED.]

In response to the President's invitation to the members to express their views on this matter,

Mr. G. P. MALE said that he proposed that they should pass a resolution in favour of the recommendations put forward by the Council of the "National." The suggestion to increase the number of members of Council had been very carefully considered by the N.V.M.A. at Newcastle and since, and he thought there was very good reason for that alteration in the Bye-law.

One of the circumstances that brought the desirability of such a change forcibly to the notice of the Association was the fact that the Presidents of the N.V.M.A. on completion of their term of office were often not re-elected as representatives of any Division, and consequently they had to stand down, although they had been doing excellent work for the Association. As they had the work at their finger tips it seemed a great pity that their experience could not be utilised. It was true that some of them were co-opted, but that was not very satisfactory. There remained also, of course, the very excellent reasons set out in the letter.

Mr. R. A. WILLETT said that he was present at the Extraordinary General Meeting at Birmingham, and that there one point that was made was that, if that resolution was passed, various people who did not belong to any Division at all would possibly be put up for election to Council. They were always being told that the members of the veterinary profession did not hang together sufficiently, and if there were (as was unfortunately the case) many people who did not even take the trouble to support their Division, they would not do much good to the veterinary profession as a whole if they got on to the "National" Council.

Mr. MALE, replying to Colonel Walker, said that the election of a member to Council N.V.M.A. would be for one year only.

Mr. J. WILLETT expressed the view that the policy of annual election to Council was not to the benefit of the "National," as it would not make for continuity of policy. The complaint had always been that so many members of the Council resided near London, but after all it was essential that its members should keep in close touch with the working of the "National" and regularity of attendance at Council meetings, which was so essential to the successful functioning of that body, had always been a problem. The headquarters of the Association were in London, and they would have a difficulty in getting a *quorum* if members of Council were distributed all over the country, as were the members of Council R.C.V.S. He thought that, provided the meeting agreed that the representation should be altered, there should be a proviso that representatives should sit for more than one year, otherwise there would be no continuity of policy at all if elected for one year only. For the purpose of discussion, he seconded Mr. Male's proposition.

Mr. J. C. COLEMAN proposed, as an amendment, "That each Division of the N.V.M.A. be represented on the Council of that body by its President, its Secretary and one for every fifty members or portion thereof." The addition of the President of each Division, who now had no seat on the Council of the "National" would, he said, increase its membership by twenty-six. In his view it was highly desirable that a man holding the honourable position of President in a Division should, in virtue of that high position, represent that Division on the Council of the parent body, and the procedure he had suggested appeared to be the only way to bring that about.

Major KIRK seconded the amendment.

Mr. MALE stated that the proposal that the President of a Division should be *ex-officio* a member of Council N.V.M.A. had also been discussed. The difficulty in regard to that was that each Division held its annual meeting and elected its President at a different period of the year. The consequence was that a President might hardly get appointed to a committee of the Council before his term of office as President came to an end.

He would instance the advantage of the suggested change by saying that, for example, in such a Division as that, there was only one representative for every fifty members, yet he could conceive of more than three members of that Division who would be very useful to the Council of the N.V.M.A.—in fact, he could name a dozen or more. If the two representatives had worked extremely well the members would not like to turn them out and put in fresh blood, but by the means now proposed they would be able, each year, to put forward the names of one or more of their members and get them elected, if the rest of the profession thought likewise. The reform suggested would be a very great advantage: they would get more members on the Council and they would get more work done because, as things were at present, with representatives scattered all over the country, it was difficult for them to get to London to attend the meetings. Under existing circumstances it was not fair to complain that the affairs of the "National" were largely in the hands of the members near London. It would not be so if there was an adequate attendance of members of Council elected throughout the Divisions.

The PRESIDENT pointed out that it was definitely stated in the resolution that twenty-five members were to be elected in addition to those who now constitute the Council.

Mr. J. WILLETT: "Now that that has been made clear, I am in agreement."

The amendment was now put to the meeting, but secured only two adherents. The resolution was then submitted to the vote, and declared carried by a large majority.

Auditor's Report and Balance Sheet. The report of Mr. J. WILLETT (Auditor) disclosed that the accounts were in order and that the finances of the Society were in a flourishing condition, and the statement of accounts was received and adopted.

Representative on the Council of the Victoria Veterinary Benevolent Fund. On the proposition of Colonel WALKER, seconded by Mr. J. BELL, Mr. Male was unanimously re-elected to represent the Division on the Council of the Fund. Returning thanks for his re-election, Mr. MALE emphasised the value of the work accomplished by the

Fund, which, however, could only adequately be appreciated by one who had the opportunity of attending the meetings of its Council.

Nominations and Elections to Membership. The PRESIDENT said that, arising out of that item on the agenda, it would be vividly recollected that they had a most interesting meeting at Mill Hill a short while ago, and he thought it would be a nice compliment if they were to elect Dr. P. P. Laidlaw as an Honorary Associate of that Society. (Applause.) They realised, of course, that Major Dunkin collaborated in the work of distemper investigation, of which they were privileged to hear on the occasion of their visit, but he was already a member of that Society. Dr. Laidlaw was not a veterinary surgeon and so could not become a member, but he was confident that his suggestion that Dr. Laidlaw should be elected an Hon. Associate would commend itself to them.

Mr. J. WILLETT seconded the President's proposal, which was carried with acclamation.

Mr. C. W. Howard (Dorking), Mr. C. P. Inglis (London), Major R. F. Wall (London), and Mr. A. E. Ward (Slough) were nominated as members of the Society, to which Captain D. Wylie (Southampton) was unanimously elected.

Amendment of Rule. In the absence of Professor G. H. Wooldridge, Mr. MALE moved, on his behalf : " That the rule governing the constitution of the Council be amended to provide for the inclusion of Vice-presidents as members of Council." In doing so, Mr. Male said that he did not think that the motion required any comment from him, for in most societies the Vice-presidents were members of Council, and he was sure that it would be their wish that the defect of their omission by oversight from the Council of that Society should be rectified forthwith.

The motion was seconded by Mr. F. W. WILLETT and carried unanimously.

CASES OF INTEREST.

Major H. KIRK said that he would like to ask the Fellows present if they could give him any idea as to what they thought was wrong with a cat that licked its skin very persistently in two or three places. In the last three months he had had three cases brought to him of cats which showed no lesions and harboured no parasites and which, so far as one could see, had nothing whatever the matter with them, but their persistent licking had so wetted and thinned the fur as to render them quite unsuitable for show, these being show animals. One was a Persian, which was to be shown at the Croydon Cat Show. The only conclusion to which he could come was that there was irritability of the nerve endings, but what the origin was he did not know, unless the irritation was engendered by intoxication from the bowel. He had tried everything he could think of—bowel antiseptics, sedatives, thyroid extract, local dressings, etc., but it had been going on for three months in spite of everything he could do.

Major F. J. TAYLOR stated that he had noticed the same nervous irritation in cats, especially neutered cats, and he termed it dorsal eczema.

Major KIRK commented that his subjects, being show specimens, could not be neutered cats.

Captain W. L. LITTLE said that, with due respect to Major Kirk, whenever he had met with such cases in cats he had found that an anti-parasitic bath would check the condition, and if they were not washed again for a week or ten days the trouble would recur. He felt convinced that the trouble was due to some parasite—perhaps not a parasite truly belonging to the cat, for they might pick them up from the rat. Cats would also bite themselves in the flank when anal gland trouble existed, as they could not get to the glands, but could reach the flank.

Major TAYLOR asked if anyone could tell him an absolutely safe parasiticide for the cat, Captain LITTLE replying that he used McDougall's dressing.

Major KIRK's comment on Captain Little's suggestion was that anal gland trouble was very rare in the cat, while a cat had no difficulty whatever in licking the anal region itself if it desired to do so in consequence of irritation located there. As to his assertion that parasites were the cause of the persistent licking, he would ask what were the parasites that attacked the cat ?—Lice, fleas and the parasites responsible for mange and ringworm. The first two they could see with the naked eye and the others could be discovered with the aid of a microscope, and search had several times been made without result.

Major F. J. TAYLOR said that he had an interesting experience with some Greyhounds during the last few weeks. They were kept on premises where carcases suffering from a multitude of fatal diseases were brought in for disposal—the owner being a horse and cattle slaughterer. The first case was in a run with five other saplings, and appeared to be perfectly healthy when fed the night before ; early on the following morning it was found dead. He (Major Taylor) had no opportunity of making a *post-mortem* on this hound. Three days afterwards a valuable brood bitch, which in the morning appeared to be perfectly well, at lunch time was found dead. In the afternoon he held a careful *post-mortem* and found that the spleen was an enormous size and the liver was also enlarged. Both organs were negroid in colour. There was no effusion into the peritoneal or thoracic cavities, and the lungs and heart were quite normal. He took a sample of the blood, and examined a smear, stained with methylene blue, under a twelfth power, being suspicious that the Greyhound died through eating anthrax flesh or blood. He could find no sign of *B. anthracis* on the slide, but there were present in large numbers organisms which reminded him of blackquarter rods with opalescent sporulating centres and ends. He took a specimen of the spleen, liver and blood to the histological and pathological laboratory of the Oxford University, and Dr. Carlton and he examined it further, and the former came to the conclusion that it most probably was blackquarter or malignant œdema. He desired to know from the members present as to whether or not it was a recognised fact that animals eating blackquartered flesh in that way died in the rapid manner those hounds died.

In answer to Major Kirk's enquiry as to the existence of rectal hæmorrhage, Major Taylor said that there were no symptoms whatever before sudden death occurred.

Replying to a question as to whether or not the muscles were affected—the muscles appeared to be engorged with black blood, of which a further examination was now being made, and he would submit a future report on the findings.

Mr. G. P. MALE exhibited a Pekingese bitch, into which he had grafted ovaries, one on each flank. He had asked

the owner to write down briefly the history of the bitch, which was as follows :—

" She is now nearly nine years old, but, as you can see, she does not look it. She had one litter when I bought her and, altogether, the following : a litter in 1924 (four puppies) ; in the same year one puppy to another sire ; in August, 1925, she had three puppies ; she missed her next season, and in November, 1926, she was mated again and had two weaklings, both dying at birth. Since then she has never bred."

She got very old-looking and decrepit, weak, and rather thin, proceeded Mr. Male, and he grafted her in September, 1928.

" She was mated to one of her sires soon after the operation and had one enormous puppy, big and strong, in November last. She was certainly a different dog since the operation, and at times was quite frisky. She should certainly mate her again this Spring, as she always bred beautiful puppies."

He had hoped to have brought them another little bitch, which was rather interesting. The owner said that she had a bitch that would only have one puppy at a litter and asked " Do you think you can get her to have more puppies ? " He replied that he did not know, but he would try it, as an experiment, if she liked. " Prior to the operation this bitch only came in season once a year and then only had a single puppy ; after the operation she came on at six months. She was mated and produced three strong puppies, and needless to say all concerned were delighted."

He would also have liked to have shown them a thoroughbred mare which had been barren for three seasons and which, having been grafted, was now in foal ; also a Retriever bitch, seven years' old, which had missed coming into season for two years and which, after grafting had been performed, was now heavy in whelp.

Replying to a member, who asked if he used the ovaries from the same species of bitch, Mr. Male said that when he started these experiments he purposely used dogs of different breeds because he wanted to see if there were any signs of the progeny being affected by the grafting. Some people contended that there was a danger of that ; therefore in the Peke bitch he used the ovaries of a small white Terrier, and in the Sealyham bitch, which he had shown to the Society two years ago, he used those of a fawn Whippet. He had watched the puppies carefully and there had not been the slightest sign of any contamination. Also, in a Black Berkshire Boar he used the testicles of a Large Black. The Berkshire had been at stud now for two years and they had not seen any sign of the Large Black breed. The grafting in that case was done in the flank and not in the testicle, as there was more danger of infection in the latter site.

Mr. J. WILLETT said that he would like to give them a record of a particular drug of which he had made considerable use. He was called about a month ago to see a horse in a well-known place. This animal was suffering with acute tympany, and on exploring, *per rectum*, he found that he could only get his hand in a little way, and he could feel a distinct displacement of the large bowel. He told the owner's representative that he took a very grave view of the condition. He enquired about medicine, and was told that they had a pharmacy there. He had in his pocket a ℥i packet of barium chloride. This was dissolved in a pint of warm water and given as a drench. He then enquired if the animal had been allowed to roll. Receiving a negative reply, he gave instructions for the animal to be allowed to roll as much as possible, and that he would return to see the horse in the evening. When he did so he found them all smiles. He was told that the animal had been in acute agony for one-and-a-half hours following the administration of the barium chloride draught ; in fact, they thought it was dying, but then the wind passed off and the animal gained relief. It made an uninterrupted recovery. He mentioned this incident because he believed that nowadays barium chloride was very seldom used in veterinary practice. At one time it was fairly commonly employed intravenously, but it caused such alarming symptoms that its use was discontinued. But he had found it very serviceable, when given by the oral route, in promoting peristaltic action. There was no doubt that if it had not reduced the displacement in the present instance the horse would have died.

Mr. MALE reported that he had that morning, in consultation with another member of that Society, operated on a cow for pericarditis due to a foreign body. All went well until he seized the pericardium with forceps to incise it, when the heart showed signs of stopping and he had to desist. He tried three times, but when, eventually, he cut through the pericardium the heart stopped. They tried artificial respiration, etc., but the cow died. She was in a very weak state when they operated, but the operation was the last resort. In another case in which he operated the same thing nearly happened—twice the heart almost stopped. He did not know that that difficulty had been mentioned by other operators.

Mr. C. W. HOWARD asked for the opinion of the members concerning one of his cases in a champion Wolfhound. A fortnight previously he had been asked to look at this dog, the owner saying that it had become very thin and had diarrhœa. Nothing had been wrong with the dog until two days before he saw him, and all the dogs on the place were very well looked after. The breathing appeared quick and he examined the chest. He could not hear a sound—even the heart was inaudible—and he expressed the belief that the chest was full of pleural effusion. The owner was incredulous, but the dog was valuable and heavily insured, and he (Mr. Howard) suggested a consultation. The consultant agreed with his diagnosis, and the dog was tapped two or three times. A specimen of the effusion was sent to a bacteriologist. Contrary to expectations, no tuberculosis organisms could be found, only the *Bacillus bronchisepticus*. The extraordinary feature of the case was that the dog had not been noticed to be ill longer than two days before the pleural effusion obliterated the thoracic sounds. He would like to know if the same thing had occurred in the experience of other practitioners. He also desired to mention the curious fact that in Greyhound and Wolfhound kennels dogs, apparently healthy the night before, eating up their food, would be found dead in the morning and one would, on *post-mortem*, find acute gastro-enteritis. This had been puzzling him for the last few years, and he thought it was a condition

that required to be thoroughly investigated by some bacteriologist.

Major KIRK observed that it appeared to be extraordinarily common to find acute lesions on *post-mortem* in cases in which there had been nothing noticeably amiss with the animal before death. He had been writing, in the *Veterinary Record*, on hæmorrhagic septicæmia in Greyhounds in opposition to the view that the condition was distemper. In these cases there was always a hæmorrhagic enteritis. He had sometimes found dogs to have a temperature of 105°, and yet they were running about, had cold noses, and were eating their food, which showed how careful one had to be in diagnosis.

It was well known that in probably 95 per cent. of cases pleural effusion was associated with tuberculosis.

He had sent organs of Greyhounds dead of hæmorrhagic enteritis, and even live dogs, to some of our best pathologists and doctors. They had all been searching for organisms, but could find none. Biological tests had negatived distemper. His basic treatment was the injection of normal horse serum in large doses, of which sometimes one dose was frequently sufficient.

Mr. F. W. WILLETT remarked that he had had a few similar cases, and if he could get them soon enough an injection of normal saline solution and the administration of hamalelis would put them right by the next day. He gave ℥iv. subcutaneously in a small dog. That brought to his mind something that happened in some St. Bernard kennels thirty years ago. They had two or three dogs, which had a good feed of meat for their evening meal. In each case they were apparently well over-night, and found dead in the morning. On *post-mortem* there was nothing abnormal to be noticed, except a little injection of the mucous membrane of the stomach, and the presence of the practically undigested food.

On the proposition of the PRESIDENT, a hearty vote of thanks was accorded those who had brought forward interesting cases.

The Treatment of Sick Animals of the Poor. The meeting then proceeded to consider, in Committee, the suggested scheme, drawn up by the R.C.V.S. and the R.S.P.C.A. for the free treatment of the sick animals of poor persons, which scheme had been sent down by the N.V.M.A. to its Divisions, at the request of the R.C.V.S., for discussion and report.

Upon the resumption of open meeting, the following resolutions were carried, for submission to the N.V.M.A., as the decisions of the Royal Counties' Division in regard to this matter :—

(1) "That this Division agrees in principle with the giving of free treatment to the sick animals of poor people, under the auspices of the R.S.P.C.A."

(2) "That this Division is in favour of the adoption of a card system, as opposed to the establishment of central clinics."

(3) "That the distribution of tickets should be limited to veterinary surgeons, representatives of the R.S.P.C.A., and the Police."

(4) "That the choice of veterinary surgeons be left to the owner of the animal."

(5) "That whatever fee is charged should be charged to the R.S.P.C.A. and not to the owner."

Next Meeting. It was decided to hold the next meeting of the Division at Guildford.

PRESIDENT'S ADDRESS.

The PRESIDENT (Mr. J. R. Hewer) then presented his address from the Chair, in the following terms :—

Since custom has decreed that a President shall address a few words at his first meeting, I propose to make a few remarks which I hope will prove of general interest, but I do not intend to inflict upon you a long address.

In the first place, I should like to convey to you my sincere thanks for the great honour you have bestowed upon me by electing me to the Chair of this old and important Division of the N.V.M.A. It is an honour I very much appreciate, but there are others more worthy of it. I assure you, however, that I will do my best for the Division, full well knowing you will all give me every assistance and support to carry out my duties while in office.

I should like to thank Captain Little for his eloquent words when he proposed me and to congratulate him on your behalf for his very successful year in this office, also for the efficient way in which he carried out his duties. (Applause.)

I trust there will be no lack of interesting and instructive papers forthcoming and that all of you, who can do so, will bring forward interesting clinical cases and *post-mortem* specimens; for it is these that add to the general interest of the meetings and bring out the ideas and experiences of other practitioners.

As regards the future outlook of the profession, I am an optimist—for there is not the slightest doubt that we are adaptable, and if we take advantage of openings as they crop up we can find further spheres for our energies. My Principal twenty years ago told me that he gave his wife the income from dogs for pin money, but I am afraid that if some of us did that to-day there would be comparatively little left for us, particularly in the larger towns.

The use of the horse has certainly declined, especially for fast work on the roads, and with it the spread of equine contagious diseases—on farms at any rate—as horses are not driven to markets and herded together with any and every disease.

As illustrating the new fields that have been opened up to the profession of late years, I need only mention one or two instances, *viz.*, ultra-violet ray and various other electric and gland therapies, and I am sure there are plenty of other undiscovered treatments that will present themselves as we progress further in research.

Public health work absorbs an ever-increasing number of our members, and I am confident that as the various public bodies become more alive to our usefulness—for, after all, we are the only people capable of giving a really sound judgment on cattle diseases—this sphere of our work will increase considerably.

One often hears people state that we have not progressed in our discoveries in the prevention and treatment of disease as they consider that we should have done, but we have only to review the facts for them to realise that we have made wonderful strides and are still making them. To take only a few instances that occur readily to my mind : milk fever is now seldom fatal, whereas twenty years or

so ago it nearly always was. Blackquarter is very much less prevalent and several farms where young stock could not be reared are now quite safe, thanks to vaccination. Rabies, rinderpest, pleuro-pneumonia and glanders have been stamped out in this country and I hope several other diseases which are the bane of practitioner and farmer alike will soon be more or less under control—I refer more especially to Johne's disease, tuberculosis, contagious abortion and mastitis.

As regards Johne's disease we have, thanks to one of our Fellows, a reliable diagnostic and I hope a vaccine may follow. The research work that is now being undertaken in mastitis will, I hope, produce the results we all desire to enable us to control it. Thanks to the work of Professor Buxton and his colleagues the diagnosis of tuberculosis has been revolutionised by the introduction of the double intradermal test. In passing, I am, for one, glad to see that the Ministry of Health have now discarded the ophthalmic test for tuberculin-tested herds.

Distemper we shall all agree, after our pleasant and instructive visit to Mill Hill, has lost its sting, especially as the vaccine is about to be produced commercially and I hope a curative serum will be forthcoming.

Concerning the political side of our profession, we did not, until after the war, as a body live up to our motto of *Vis Unita Fortior*, but since then there has been a decided revival of interest, as is seen in the rejuvenation of the N.V.M.A., which is to-day a real live body taking a keen interest in our welfare. One has only to read the reports of the quarterly meetings of that body to see how its work increases.

I would strongly recommend every M.R.C.V.S. to join the N.V.M.A. and also one of its Divisions, and to attend as many of the meetings as he possibly can, even at some inconvenience, for I am sure he will find it of great help both socially and professionally. Further, the stronger we are numerically and the greater unity we show the more pressure will headquarters be able to put behind their arguments when approaching public or other bodies.

I should like, also, to urge all those who have not yet done so to subscribe to the Victoria Veterinary Benevolent and the National Veterinary Benevolent and Mutual Defence Societies, for the small annual subscription will not be missed. Though I hope none of us nor our dependents will want financial assistance through bad luck, old age, or infirmities, there are many others who are so afflicted, who could be materially assisted by increased regular subscriptions. Although we, individually, may have been fortunate enough not to be involved in legal disputes, we may be at any time, and if one does not have the backing of such a body as the Mutual Defence Society the results may be disastrous.

Finally, I think headquarters might urge the Ministry of Health to bring pressure on the graded milk question, to enforce that invalids' or children's milk, when asked for, shall be one of the designated varieties and not simply milk that is possibly bottled from the bulk sample with a pretty label, as can happen at present, and also that the supply of tuberculin and the various vaccines should be restricted to members of the veterinary profession, as they are much too widely distributed at the present time.

In conclusion, I should like to thank you all for your patient hearing, for I am sure you want to adjourn to the lighter side of this meeting.

At the conclusion of his address the President was accorded the hearty thanks of the members, both for his remarks and for his conduct of the meeting, on the proposition of Major KIRK.

THE ANNUAL DINNER.

After a brief interval, the members proceeded to the enjoyment of the Annual Dinner, an admirable repast being served by the Great Western Hotel.

A thoroughly enjoyable social evening was then spent, the brief speeches being plentifully interspersed with musical items by Messrs. Feltham, Hunter and Williams.

The toast of "His Majesty the King" having been honoured in a manner to which circumstances present in the mind of everyone lent additional feeling, Major HAMILTON KIRK proposed "The Royal College of Veterinary Surgeons." The submission of that toast, said Major Kirk, was not only a very pleasant duty, but, he ventured to think, rather an important one. They were glad to know that there were present that evening three eminent members of that important body. (Hear, hear.) The Council of the Royal College often was subjected to a great deal of unkind criticism, but he could assure them that its duties, although increasing year by year, and not infrequently of an onerous nature, were nevertheless always well and conscientiously performed.

The veterinary profession had made such strides of late years that its members should rejoice in its progress and endeavour by every means in their power to follow up that progress. Those of their members who had not been recently to Red Lion Square would find, did they now do so, that the College was housed in premises which were quite palatial in appearance, and which were now worthy of the dignity and importance of the profession.

He always held that speeches should be abbreviated at convivial gatherings, and, in consequence, proposed to cut his short. He felt that his small effort was rather like a bull-headed calf—easier to conceive than to deliver. (Applause.)

Mr. J. WILLETT, responding, thanked the members, on behalf of the Royal College, for the enthusiastic way in which they had honoured that toast. As had been inferred by the proposer of the toast, the Royal College was a much maligned body, but the epitome of its activities sent to the veterinary press did not nearly represent the extent of its labours. Many matters that had involved long hours of deliberation were dismissed in the columns of the veterinary journals in a few words. For instance, there was the unfortunate necessity for the holding, at frequent intervals, of a Registration Committee, in which they had to sit in judgment on their fellow practitioners—a few words of print summed up proceedings which sometimes had taken the Committee from early afternoon to seven o'clock at night. No pains were spared to deal justly with all the cases that came before them, and no-one could realise the amount of work done by that single Committee until one became a member of it. Then there was one special Sub-committee, of which Mr. Male and he were members, and they had sat for three months and might

possibly have to sit for a further period of several months before making their findings known—findings which might have a far-reaching effect upon the members of the profession.

He thanked them on behalf of his colleagues for their kind reception of the toast of the governing body of the profession.

The toast of "The Royal Counties' Veterinary Medical Association" was submitted by Mr. J. J. AVESTON, of Bath, who said that it afforded him particular pleasure to be present that evening because his old friend Mr. Hewer had been chosen by that Society as President for the year. He had heard Mr. Hewer say that he was fully conscious of the honour they had accorded him in electing him to the office of President. It was indeed an honour, and it was a matter for pride when one's colleagues bestowed upon one the highest honour it was in their power to confer, but no man merited that honour more than did their President. (Applause.) Mr. Hewer had been for many years one of the mainstays of the Division with which he (Mr. Aveston) had the privilege of being associated—the Mid-West and South Wales Division. That Division had tried to be a success, and Mr. Hewer had helped them in many ways to achieve that object. He (Mr. Aveston) felt certain that within a short period he would be called upon to occupy the same position in the "Mid-West" Division as he did in their Division that day; nor, when that time came, would the "Mid-West" be disappointed. (Hear, hear.)

He was happy to be present for another reason, also, in that several other members of their Division were also members of the "Mid-West" (of which he had had the privilege of being President and also Secretary), namely, Captain Austin, Mr. Baxter, Mr. Coleman, Major Taylor, Major Seldon and Principal Hobday, an hon. member, so he felt quite at home. They should feel justly proud of such members as Mr. Willett, Mr. Male, Mr. Slocock, Professor Buxton and others, who had given so freely of their services to the profession. Proceeding, Mr. Aveston said that societies such as those did stand in a very close relation to the success of the profession, as a whole, because it was an acknowledged fact that but for the holding of those veterinary meetings and social gatherings, where the members met each other, making new friends and cementing old friendships, the profession would not stand in the position in which it did to-day. Each and all had an important duty to perform in endeavouring to secure new members, so that the Divisions might be truly representative of the profession in the areas which they covered. The President and the other officers of a Division would do their share, but unless they had the whole-hearted co-operation of all their members very little could be accomplished.

He had very great pleasure in being with them, in proposing the health of their Division, and in expressing the hope that it would go on from success to further success, confident in the knowledge that, with Mr. Hewer to lead them, they could not fail to attain it. They would, he was sure, be able to look back upon Mr. Hewer's year of office as one of the most successful in the long history of that Society. (Applause.)

The PRESIDENT, who was accorded an ovation on rising to reply, thanked the company for the manner in which they had received the toast, which was dear to the hearts of all of them; although he was the spokesman for them all, it was their own health, as a Society, that they had so justifiably toasted. (Hear, hear.) He urged them to bear in mind that regular attendance at the meetings of the Society was an essential to its continued success and he hoped if they had enjoyed themselves at these meetings they would make a point of telling those that did not attend what they had missed—that those meetings were really worth attending, not only for the many valuable things they heard there but because of the opportunity they afforded members of meeting their fellows afterwards.

He wished to thank Mr. Aveston most sincerely for the very kind way in which he had both proposed the toast of the Royal Counties' Division, and referred to him personally. He only hoped that he would be able to live up to the forecast Mr. Aveston had given them. He was indeed pleased to see him there that evening, for he had been associated with him for a number of years in various ways, and he had always found him a very easy person with whom to get on, and a real friend. (Applause.)

The toast of "Agriculture" was proposed by Colonel G. K. WALKER, who said that that was a toast to which the veterinary profession and that Society were always delighted to do honour. He ventured to say that no two great professions had a greater mutual respect for one another than had agriculture and the veterinary profession. The veterinary profession owed a great deal to agriculture, and he thought he could say justifiably that agriculture owed a good deal to the veterinary profession. The prosperity of the two professions was intimately connected, and he wished they could say that the public generally realised that something more ought to be done to make them prosperous. Maybe the urban population in this country realised the facts, but they would have to wait for more prosperous days. He felt that those days would come and that, therefore, they should not be unduly pessimistic. The day was not far distant when all would realise that for what we ate and what we wore we were indebted to agriculture, and that while we could do without many of the things supplied by the non-agriculturalist we could dispense with none of the things produced by the agriculturalist.

He had spent a great number of years in India, where agricultural methods were very primitive in many respects, but the Indian agriculturalist was beginning to realise the value of co-operation, and he put it to the agriculturalists of Great Britain that there was scope for that in their efforts to meet some of the difficulties with which they were faced at the present moment. (Applause.)

Mr. W. J. CUMBER and Mr. HUGH EWING, two well-known agriculturalists, responded, the former causing amusement by furnishing an apt variation of the saying that when the doctor goes into a house the undertaker's man is always at the opposite side of the road. He did not think that applied to the veterinary surgeon, yet when he saw him entering the yard he knew that the knacker-man could not be far away. Both speakers more than amended matters by paying tribute to the very great value of the veterinarian to the agriculturalist.

Captain H. B. COLLET gave "The Visitors," replies being made by Mr. C. P. Inglis and Mr. Burrows, the Chief Constable of Reading. H. BELL, *Hon. Secretary.*

Eastern Counties Division N.V.M.A.

A meeting of the Eastern Counties Veterinary Medical Society was held at the Royal Hotel, Norwich, on December 6th, 1928, with the President, Mr. W. Shipley, in the Chair.

There were also present Messrs. M. Bray, W. F. Howe, J. Buckingham, H. Buckingham, H. P. Standley, H. P. Standley, jun., H. V. Low, W. H. Wortley, J. Boyle, E. T. Matthews, P. R. Turner, J. F. Smith, S. Bennett, and Colonel W. A. Wood.

Apologies for non-attendance were received from Messrs. H. L. Roberts, T. G. Heatley, A. Eccles, P. Welch, J. Kerry, A. Burgon, J. B. Buxton, T. J. Bosworth, R. E. Glover, and H. R. Allen.

Mr. S. Bennett was nominated for election as member.

A communication from the National Veterinary Medical Association *re* forming central clinics for treatment of animals, the property of poor persons, in conjunction with the R.S.C.P.A., was read and discussed, many members taking part.

The following resolution, proposed by Mr. P. R. TURNER and seconded by Mr. H. V. LOW, was carried unanimously : "That this Society is of opinion, in view of the fact that its members are willing to treat animals of the poor without remuneration, that it is neither necessary, nor even practicable, in the Eastern Counties, to form central clinics in conjunction with the R.S.P.C.A. The members of the Society are, however, willing to treat cases at their own infirmaries, or, when necessary, to visit such cases at the owner's premises, if assured by the R.S.P.C.A., or other organised societies, that the owners cannot afford to pay, providing that such societies are prepared to pay a reasonable fee in consideration of services rendered."

Some interesting cases of bracken poisoning were described by Messrs. M. Bray and H. P. Standley.

Mr. P. R. Turner showed some excellent X-ray photographs of intestinal ulcer in a dog.

It was arranged that the next meeting of the Society should take place at Ipswich in February.

W. A. WOOD, *Hon. Secretary.*

From The Veterinarian, February, 1828.

Extracts from Foreign Journals.

INJECTION OF MEDICINES INTO THE VEINS.
By M. DUPUY.

Long intrusted with the teaching of materia medica (raisonnée) or, what Bourgelat styles the science of indications, I have anxiously sought every means to simplify it and free it from a multitude of medicinal substances handed down to us from old traditions in the works of the present day, and which but for them might have had their virtues (but too often manifesting contrarieties) put to the test of accurate observation. With this view, I have practised numerous injections into the veins of animals: a mode of administration eligible for its simplicity since only such medicines can be used as are soluble in water, the common vehicle in the pharmacy, and since it admits of greater precision in determining the part subject to the medicinal influence; an influence modified by a variety of circumstances when the medicine is administered through the ordinary channels.

I have observed also that medicines injected into the veins in a state of solution, even in very small doses, exert a quicker and more intense effect. Aloes, which requires from eighteen to twenty hours to take effect within the bowels, operates immediately when injected. In many cases, those, for example, of distention of the stomach, the administration of drinks, even the mildest, excites alarming convulsions, the consequence of which is often rupture of that viscus. Here injection would be the preferable mode.

With a view of coming at the action of the medicine itself, and not confounding it with the effects of the water, M. Dupuy very properly sets out with the injection of plain water, first raised to the temperature of the body. His method of proceeding is this. The jugular vein is opened with a common phleme, as in bleeding; a canula or pipe with very contracted orifices is introduced in a direction downwards—towards the heart, and maintained therein by an assistant; the syringe containing the liquid is then applied, and the injection is slowly and cautiously conducted. Afterwards the wound is pinned up as after bleeding.

May 27th, 1826. Eight pints of warm water were injected into the veins of a young glandered horse. Immediately respiration and circulation became greatly accelerated and embarrassed: the pulsations of the heart violent and distinctly audible on the left side; the submaxillary artery tense, pulse small; all the subcutaneous vessels distended; but as the plentitude of these vessels increased, the artery became more compressible; the heart's action less violent; the conjunctive and other mucous membranes pallid. Two hours after the injection, the animal grew dull, though his respiration continued short and accelerated; he cast looks at his flank, and was up and down like a horse with gripes. Urine abundant and very dark-coloured. A small bleeding seemed to relieve him. The blood coagulated almost immediately, and was covered with a buffy coat which pervaded three-fourths of the mass. The symptoms gradually subsided, and eight hours afterwards the animal had perfectly recovered. 28th.—Ten pints were injected, which produced similar but less marked derangement. 29th.—Twelve pints were introduced, with same result. 30th.—The injection was augmented to fifteen pints. The animal staggered and with difficulty walked into his stable. Here he lay down. Four hours afterwards however, after having staled copiously, he appeared quite well again.

Similar results to these, which it is evident present nothing to alarm us, have attended the same experiment practised on several other horses, viz.: Quickened respiration and circulation; slight colics and vascular turgidity; yielding to moderate blood-letting, copious urinary evacuations, and increased pulmonary exhalation.

June 2nd.—M. Dupuy injected twelve pints of warm water containing in solution grs. xij. of subcarbonate of ammonia. This seemed to cause more and longer continued uneasiness, but not essentially to vary the symptoms. 6th.—The same injection was repeated, but more with a view to discovering what effect it might have on the disease (glanders) the mare had, and it turned out that the swollen submaxillary glands, the nasal discharge, and the ulcerations of the membrane had disappeared in the course of the experiments. 10th.—She was bled to death.

Examination. Adhesions between the vaginal coverings of the testicles; kidneys infiltrated with a reddish serum; urinary canals enlarged; mucous membrane of the stomach turned brown; lungs emphysematous, their inferior border presenting incipient white hepatization, superior border tuberculous, besides many little cysts throughout their substance; incipient adhesions between the pericardial and costal pleuræ; left lung marbled, brown and black (echymoses); interior of the ventricles of the brain injected, as was also the spinal marrow; the membrane lining the frontal sinuses and ethmoidal convolutions highly injected; the nasal meatus dilated; the inferior cornu of the left nostril, as well as the membrane itself,

presented some superficial ulcerations; the lymphatic glands of the throat and breast were pale but firm: the par vagum palely reddened.

Rugby Football.

The London College defeat Dublin at Osterley Park.

The Royal Veterinary College Rugby Fifteen gained a meritorious "home" success over their rivals from the Dublin College in defeating them by 17 points to 10 at Osterley Park on 9th February, 1929.

London lost the toss and Peele kicked off. From a scrum in midfield, Filgate secured the ball and, breaking away, passed to Hobday, who scored in the corner. Peele failed with the kick. After this London pressed hard and Harvey just failed to goal from a free kick far out. The Dublin forwards now carried the play into the London "25" by a good rush, but Cautley relieved the pressure with a fine kick to touch. Two strong forward rushes, led by Runciman and Hobday, took the play back to the Dublin line. From a long kick by a Dublin forward, Harvey gathered and ran across to the other wing, where his smart inter-passing with Cautley ended in the latter going over for a try in the corner. Harvey failed to convert. A good passing movement by the London threes ended in Harvey kicking the ball over the line, and Runciman followed up to score a try. Peele failed with the kick from an easy position. The Dublin three-quarters secured possession, but strong tackling prevented them from making headway. The London forwards were always pressing and half-time came with London leading by nine points to *nil*.

After the resumption, Dublin got more of the ball and good kicks by Lambert and O'Brien kept the play on the London line. A good passing movement by the London threes ended in Hobday sending Harvey over for a try in the corner, but that player failed with the kick. Play was once more in the London territory, but Cundell relieved by a good kick to touch. From a scrum the ball came out to Peele, who ran round and passed to Cautley, the latter eluding the full back to score under the posts. Harvey converted. From the kick-off the Dublin threes again took the play down the field, and from a line out O'Brien passed out for Harris to score under the posts. O'Brien converted. Dublin continued to press and Harris pushed his way over for a try which O'Brien converted. This was the last score, the whistle going shortly afterwards.

London deserved their win. Their forwards were always better, and good tackling by the three-quarters gave the Dublin line very little chance. For London, Runciman, Hobday, and Nicholson were outstanding amongst the forwards. Filgate and Cautley were good, and Cundell played a safe game at full back. O'Brien, Harris and Furney played well for Dublin.

Score. *London*: Three tries and a goal, 17 pts.
Dublin: Two goals, 10 pts.

London. Cautley, 2; Harvey, Hobday and Runciman. Harvey converted one.

Dublin. Harris, 2. O'Brien converted both.

After the match the teams went on to Twickenham, and then to a dinner at Pinoli's, where Professor Wooldridge presented his cup to the Captain of the London team. Professor O'Connor from Dublin, and Professor McCunn were also present, as was Mr. L. M. Magee, M.R.C.V.S., the old Irish international, who had refereed the match in the morning. The evening's entertainment was concluded by a visit to the Alhambra.

Annual Incidence of Foot-and-Mouth Disease.

During the year 1928, 138 outbreaks of foot-and-mouth disease were confirmed, as compared with 141 in 1927, 204 in 1926, and 260 in 1925.

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An order issued by the Ministry of Agriculture prohibits the landing of live stock and hay and straw from U.S.A., presumably on account of foot-and-mouth disease.

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events.

Feb. 23rd—Annual Meeting of the North of England Division N.V.M.A., at Newcastle-on-Tyne.
" 25th—Meeting of the Editorial Committee, N.V.M.A., 10 Gray's Inn Square, W.C.
" 27th—Meeting of the Ayr Congress Provisional Committee, at Glasgow.
" 28th—Annual General Meeting of the Eastern Counties' Division, N.V.M.A., at Ipswich.
Mar. 6th—Meeting of the Lancashire Division, N.V.M.A., at the Liverpool University.
" 7th—Meeting of the Central Division, N.V.M.A., at 10 Red Lion Square, W.C.

Parade of Van Horses.

The Rt. Hon. Lord Mayor and the Lady Mayoress of London will present the awards at the Easter Monday Parade of Van Horses to be held on April 1st in the Inner Circle, Regent's Park, London.

Among the fifteen judges will be such well-known horse authorities as Lord Daresbury, Sir George Hastings, Lieut.-Col. Percy Laurie (of the Mounted Police), Lieut.-General Sir E. Bethune and the Director of Remounts (General G. H. A. White).

The following gentlemen will act as Veterinary Inspectors:—Mr. C. Cunningham, M.R.C.V.S.; Mr. W. J. Hatton, M.R.C.V.S.; Professor J. McCunn, M.R.C.V.S.; Mr. E. Alfred West, F.R.C.V.S.; Mr. W. J. Willett, M.R.C.V.S.; and Mr. G. H. Williams, M.R.C.V.S.

In 1928, 800 horses competed, and as the coming Parade is the 21st of the series, efforts are being made to obtain a thousand entries to commemorate the coming of age show.

The Working of the Tuberculosis Order in Cumberland.

In his report for the last quarter of 1928, Mr. R. Simpson, F.R.C.V.S., Chief Veterinary Officer to the Cumberland County Council, says:—

"Including three notifications carried over from last quarter, a total of sixty-six reported cases has been dealt with, and in five of these cases a diagnosis is still pending. Thirty-nine of the notifications were received from owners, nineteen from veterinary surgeons, six as a result of inspections under the Milk and Dairies Acts and Orders, and two from Auction Companies following the rejection of cows on account of breach of warranty. As a result of the examinations carried out, eighteen animals were found to be affected with tuberculous emaciation, eleven showed a chronic cough and clinical signs of the disease, and six were affected with tuberculous disease of the udder. The slaughter of these animals has been authorised and carried out, the *post-mortem* examination in each case showing the presence of tuberculous lesions. Twenty-three (66%) of the animals slaughtered showed evidence of advanced disease, and in twelve cases (34%) the disease was not advanced. Two animals were slaughtered on the owners' initiative without compensation, and in two cases, death took place before an examination was carried out. The total amount of compensation payable amounts to £110 17s. 6d., the local authority being responsible for one-fourth, namely, £27 14s. 4d., to meet which there is available the sum of £38 8s. 6d., being the receipts from salvage. The average net compensation payable in each case is £3 3s. 4d., and the average valuation is approximately £6 7s. 3d. All the valuations were

carried out in agreement with the owners without incurring any valuers' fees. In connection with the Order 132 visits to farms and slaughterhouses have been made during the quarter, and 1,189 contact cattle have been examined. Proceedings in connection with two cases were taken during the quarter, and fines were imposed in each case.

"These cases are again referred to in the latter part of this report. Failure to report before the animals concerned have reached an extremely diseased condition has already been discussed in previous reports, and it would be well for the Committee to consider at this stage in the operation of the Order whether fuller use should not be made of the powers given to local authorities to withhold compensation in cases where, in the opinion of the local authority, an offence in this direction has been committed against the Order. The slaughter of animals which are practically in a moribund condition as the result of the disease cannot possibly result in any useful purpose being served. Such animals have done all the damage they can possibly do, and the payment of compensation in these cases should be withheld altogether or the minimum compensation reduced. On the other hand, there seems also to be a tendency to neglect reporting cases of chronic disease of the udder. To some extent this is being counteracted by the inspections carried out under the Milk and Dairies Order. A readier compliance with the requirements of the Order in this respect could not but have a direct influence on the reduction of infection in milk supplies.

"The Order is now in the fourth year of its operation, and it is not unreasonable to expect that stock owners should be fully aware of the requirements of the Order, and consequently failure to report suspected cases should not be excused on the grounds of ignorance regarding the Order.

"As the completion of this Quarter marks the end of another full year's working of the Order, the total number of animals slaughtered is shown for the past three years.

Year.	Cows in Milk.	Other Cows.	Other Bovine Animals.	Total.
1928	93 ...	49 ...	10 ...	152
1927	97 ...	52 ...	13 ...	162
1926	83 ...	47 ...	8 ...	138

Veterinary Inspection at Sales.

East Sussex Committee Discusses its Liability to Pay Compensation.

The question of veterinary inspection at sales gave rise to discussion at a meeting of the East Sussex Agricultural Committee at Lewes recently.

The Diseases of Animals Sub-Committee reported that a letter had been received from a Polegate farmer relative to the inspection of his animals prior to his sale on October 4. Having considered the letter, and a report from the Chief Constable, the Sub-Committee recommended that the farmer be informed of the reason for the late inspection of the animals, and that they were of opinion that the inspector carried out his duties in accordance with requirements of the Acts and in a bona fide manner.

Mr. J. C. Robinson said the inspection took place on the morning of the sale, and the Inspector stopped the sale of one cow because it coughed. The cow afterwards passed three tests, but when sold it fetched £10 less than might have been expected at the original sale. The owner asked the Sub-Committee for compensation and was informed that the Inspector was only doing his duty, and that they would not pay. He (Mr. Robinson) considered that the Inspector was in error and that they should pay the £10.

Captain Baxendale considered it would be very dangerous to admit compensation in such cases and held that the veterinary surgeon only did his duty.

Mr. H. R. Brand agreed that it would be a dangerous precedent, and the secretary (Mr. L. R. Edmunds) said it would open the door to heavy liability for the Committee.

Some amusement was caused by Mr. C. E. Tritton, who asked, if they established a precedent in the matter and an animal was withheld, and subsequently was sold for a price higher than it might have been expected to fetch, would the farmer hand the difference over to the Committee?

Mr. W. Wood contended that inspections should take place long enough before a sale to enable another animal to be substituted for the one withheld.

Mr. Robinson intimated that if they could not see their way to compensate the farmer in this case he should cease to be a member of the Sub-Committee.

The Sub-Committee's recommendation was agreed to.

Caseous Lymphadenitis in Argentine Meat.

In the House of Commons recently, Mr. W. Thorne asked the Secretary to the Overseas Trade Department whether there was any code of published instructions issued by the Government of Argentina to the staff of inspectors employed in the frigorificos of the Republic which slaughter meat for export; and, if so, if he would state the exact terms of the instructions as to the procedure in cases where they discover the animal to be affected with the disease of caseous lymphadenitis.

Mr. Hacking: I have a translation of the Decree of October 31st, 1927, which aims at the prevention of the slaughter of infected animals. I also have a copy of the amendments made on January 27th, 1928. As these Decrees, however, do not contain the exact instructions issued to inspectors, I will endeavour to obtain the necessary information through His Majesty's Ambassador in Buenos Aires, and will communicate the result of my inquiries to the hon. Member.

Mr. Thorne asked the Minister of Health if he was aware that during the last six months a certain number of sheep from Argentina have arrived in this country with the glands of the legs and shoulders carefully trimmed out and dressed in such a manner that meat inspectors in Great Britain had great difficulty in deciding whether the carcases are affected or not with caseous lymphadenitis; and whether he would instruct all inspecting authorities that, where they find the vital points for inspection have been removed in this manner, they should condemn the whole carcase as unfit for human consumption.

Sir K. Wood: My right hon. friend understands the facts are as stated in the first part of the question. The view adopted by my Department and by local authorities generally is that the removal of the lymphatic glands, which are likely to be affected with caseous lymphadenitis, constitutes sufficient evidence to justify the seizure and condemnation of the carcase on account of that disease. My right hon. friend does not think it is necessary to issue special instructions to local authorities on this point.

The Hunters' Improvement and National Light Horse Breeding Society.

At a recent meeting of the Council of this Society, the Horse Show Committee reported that the entry for the Society's 45th Spring Show at the Royal Agricultural Hall on February 26th, 27th, and 28th was 117 thoroughbred stallions and 192 hunters. From the six classes of young stock 13 groups (with an aggregate entry of 52) would be constituted.

Details from the Royal Artillery and Cavalry will be on exhibition to show types of horses required in the Army.

Particulars of the procedure to be followed in respect of the purchase of mares cast from the Army but suitable for breeding were approved by the Council. The co-operation of the District Remount Officers would be available in the periodical inspection of all located mares.

Mr. R. C. Irving, F.R.C.V.S., and Mr. Clement Elphick, M.R.C.V.S., were appointed as the Society's Veterinary Inspectors for Middlesex and Northumberland and Cumberland respectively, to fill the vacancies due to the deaths of Mr. C. Herbert Sheather and Lieut.-Col. George Elphick.

Seventy-three new candidates were admitted to membership.

XUM

Army Veterinary Service.

London Gazette—War Office—Militia.

Supplementary to Units or Corps.

March 20, 1928—Capt. S. E. Holmes relinquishes his commn. (20th Feb., 1928) and is granted the rank of Major.

Export of Horses.

The number of horses exported to Europe during the year 1928 was 10,528. Of these 2,412 went to Belgium, 4,990 to Holland, 2,637 to France, and 489 to other countries. Of this number 2,245 were shipped for immediate slaughter on arrival.

Dog's 168*-mile Journey Home.*—After having been lost in Southampton 15 weeks ago, a Retriever dog belonging to Captain Atkins, of Wolverhampton, returned home, weak and emaciated, a few days ago. The distance from Southampton as the crow flies is 168 miles. The dog made the journey to Southampton by motor-car on October 7, when Captain Atkins went there, and it disappeared on October 9.

At the moment British (or English) beef is obtained from heifers, steers, bulls and cows of all ages; it is a mixture of the best and the worst, with more of the latter prevailing than the former. As an article of commerce it is universally regarded as being quite second rate. Specialisation in the production of super quality beef, outside Scotland, has scarcely begun, and can only succeed when it is specially marketed. Cow beef, like ewe and tup mutton, should be reserved for the kennels.—*Live Stock Journal.*

Notice of Change of Address.—The House of ARMOUR AND COMPANY, LTD., for many years now with General Offices at Queen's House, Kingsway, W.C.2, have found it necessary, owing to the increase of business, to take larger and more commodious premises at Armour House, St. Martins-le-Grand, E.C.1.

These new premises represent probably the most up-to-date of any of the new buildings that have arisen in the City since the War. Express lifts and automatic internal telephones, maximum light, and staff comforts are embodied in this excellent building.

A most cordial invitation is extended to all Veterinarians who are interested in modern equipped offices to call and personally inspect them at any time whilst the offices are open for normal business. Every up-to-date facility for increasing the efficiency of the now famous Armour service has been incorporated, and visitors will find a host of things of interest.

"*Spillers Shapes.*"—Messrs. Spillers have adopted this name for their product hitherto known as "Spillers Assorted Sippets"—one which has done much to banish the monotony of the feeding bowl as far as dog biscuits are concerned. "Shapes" consist of four kinds, each with a distinctive flavour of its own. The flavours comprise Ginger, Fruit, Wheatmeal and a delicacy which Spillers have named "Super." A liberal testing sample will be sent on receipt of a postcard addressed to Spillers Victoria Foods, Jacob Street, Bermondsey, London, S.E.1.

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents

Dogs and Worms.

To the Editor of The Veterinary Record.

Sir,—I am grievously troubled that Major Kirk and I do not think alike upon the matter of the percentage of dogs harbouring worms. But fortunately I do agree with him sometimes regarding the importance of these parasites, for, when I feel affluent and exalted, I treat them with indifference and their various owners with superior toleration. On the other hand, in times of financial stress, when the atmosphere lacks that roseate hue we so much desire, then are the worms treated with calomel, areca, santonin and other noxious substances, and the clients with exaggerated civility, if not servility.

From this confession of mine, those who are interested can learn my exact position. It lies between the eminence of the canine pathologist and the lowliness of the canine specialist.—Yours, Bernard Gorton.

22 Arnewood Road,
Bournemouth,
Hants.
February 17th, 1929.

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To the Editor of The Veterinary Record.

Sir,—In reply to Major Hamilton Kirk's statement that in about ninety per cent. of the dogs upon which he has made a *post-mortem* examination he found some worms in the alimentary tract. I may state that this is quite different from my own experience.

During the last forty years I have made hundreds of *post-mortem* examinations on the carcases of dogs which have died from disease, accident or lethal chamber, and I have found the percentage of those in which worms were found to be near nine than ninety per cent. It was only the other day that my son, who has been opening dozens of carcases of dogs in the hope of obtaining a few good specimens of the various worms inhabiting the intestines of the dog, remarked how rarely he found a worm or traces of worms. I can only assume that in the South East of London worms do not flourish as they seem to do in Major Hamilton Kirk's district. I must say that I endorse every word of Mr. Gorton's letter.—Yours faithfully, T. F. Prime.

Norwood,
S.E. 19.

Helping the Horse.

To the Editor of The Veterinary Record.

Sir,—The constant discussions of the dangers of the modern motoring road for horse traffic and the difficulties of the horse in city streets seem to show that little attention is paid yet to the immense help which can be given to horses by scientific shoeing. I know that horse-owners are notoriously conservative and sceptical of anything but the old-fashioned shoe, even thought it was invented for road surfaces very different from those which we have to-day, but possibly they may be interested to hear of the practical experience of the firm of contractors of which I am a director.

In 1921 we began shoeing our heavy draught horses with flexible steel bridge pads, which provide a gripping surface of rubber and at the same time overcome the objections to most pads by allowing the frog of the horse's foot to function in the natural way. Since then we have had very few accidents, horses down or shafts broken. Lameness due to slipping has been practically abolished, with the result that our horses have not needed to be put out to rest and their usefulness has been prolonged.

On the recent silver thaw day our horses were working as usual without mishap and we have had no need to use any other form of winter shoeing.

The cost of shoeing with the special grip is greater than without it, but the extra cost is cancelled out by the longer life of the shoe and far outweighed by the increased efficiency of the horse. A horse that is frightened can never be efficient.—Yours faithfully, George M. Burt
(Director, John Mowlem and Co., Limited).

John Mowlem and Co., Limited,
41 Ebury Road, S.W.1.
February 12th, 1929.

The Editor acknowledges the receipt of the following:—

Communications from Mr. J. M. Buchanan (Stowmarket), Mr. H. Gray (Kensington), Mr. J. Pollard (Halifax), and Lieut.-Col. J. W. Rainey (Kingsbridge).

Report of a meeting of the Dumfries and Galloway Division, N.V.M.A., from Mr. A. Young (Hon. Secretary).

Report of a meeting of the Scottish Branch, N.V.M.A. from Mr. W. C. Miller (Hon. Secretary).